

The Malacological Taxa of Henry Hemphill

by

EUGENE COAN

Research Associate, Department of Invertebrate Zoology, California Academy of Sciences,
Golden Gate Park, San Francisco, California 94118, U.S.A.

AND

BARRY ROTH

Department of Invertebrate Zoology, Santa Barbara Museum of Natural History,
2559 Puesta Del Sol Road, Santa Barbara, California 93105, U.S.A.

Abstract. Henry Hemphill (1830-1914) was an early malacologist in the western United States, whose specimens formed the basis of the present collection of the California Academy of Sciences. In his papers on mollusks, he introduced some 102 names, mostly for land snails. Eighteen of these are *nomina nuda* or are otherwise unavailable. Of his 84 available names, 50 are now regarded as junior synonyms and 34 are recognized as valid. We have located type material of all but one of the available names. One lectotype designation is made. Other workers introduced 25 names coined by Hemphill, of which 7 are unavailable and 18 are available. A bibliography of Hemphill's papers is provided.

INTRODUCTION

HENRY HEMPHILL (1830-1914) was an early and influential malacologist on the west coast of the United States. He amassed a huge collection of land, freshwater, and marine mollusks, which, when divided, became the nucleus of the present holdings of the California Academy of Sciences and Stanford University.

This article provides a complete bibliography of Hemphill's published works on mollusks and lists the nomenclatural units that were first published by him, or that have been credited to him.

The published information about Hemphill's life is sparse (ANON., 1914a, b; BAILY, 1962; DALL, 1914; HOWARD, 1972). He was born in Delaware in 1830. Beginning around 1861, he traveled in the West, finally settling in San Diego, California, in 1865, where he worked as a bricklayer. However, he also made a number of gold prospecting trips in the western states. He evidently started collecting mollusks as early as 1861, and under the influence of such Californian malacologists as Wesley Newcomb and Robert E. C. Stearns increasingly turned his attention from gold to mollusks.

He collected extensively throughout the western states, Baja California, and Florida. Unfortunately, the only information on the timing and localities of his wanderings

lies in bits and pieces scattered in his writings and on specimen labels.

From the 1870's to 1890 he published small catalogues of shells for sale (HEMPHILL, 187[?], 1875, 1878, 1881c, d, 1890f). Around this time too he began to publish articles in the *Proceedings of the California Academy of Sciences*, *The Nautilus*, and other serials. He sent samples from his collecting to experts in the eastern U.S., including William G. Binney and Henry A. Pilsbry, and they were responsible for the publication of many of his names, variously with and without descriptive text contributed by Hemphill.

Around 1909, he moved to Oakland, California, to live with his daughter. He died 24 July 1914, as a result of contact with arsenic he used in preserving specimens.

In the following list, we have included all the names that were first made available by Hemphill in his publications, new names that appear in his publications as *nomina nuda*, and names—both available and *nomina nuda*—published by others but credited to Hemphill.

Some of Hemphill's practices have caused problems for later systematists. He sorted his material for uniformity (thereby destroying all evidence of population structure), lumped together under a single locality specimens from numerous stations, sold or otherwise sent out material

labeled with unpublished names, introduced many *nomina nuda*, and had a predilection to see "varieties" and dignify them with formal naming. In at least the case of *Epiphragmophora traski* var. *cuyamacensis*, he seems to have sent the shells of the lot to one specialist (Bartsch) and the soft anatomy to another (Pilsbry), with the ultimate result that it was described twice. If part of the problem of the haphazard validation of his manuscript names lay with the exuberance of what has been called the "Descriptive Age of Malacology" (BOSS *et al.*, 1968:1), these foibles of Hemphill's did nothing to discourage the syndrome.

The following are a number of complications and factors that must be kept in mind when using this list.

Trinomials: Particularly in his work on land mollusks, Hemphill proposed a great many trinomials for entities that today are regarded merely as intrapopulational variants. Most have been synonymized by subsequent workers, but they should be kept in mind if it is found that additional taxa can be recognized in the groups involved. His named "varieties" often appear as separate entries in his sales catalogues, suggesting that in part he may have tried to increase the number of his marketable products.

Authorship: Manuscript names accompanying Hemphill material in various collections and the many *nomina nuda* in his sales catalogues suggest that, given the opportunity, he would have proposed a great many more names, mainly for "varieties." Some of these manuscript names were picked up and made available by other authors, who often simply credited them to Hemphill. In reality, the names should be fully credited to these later authors, because they are responsible for the conditions that made the names available (*ICZN Code*, Art. 50). Compilers of the taxa of such authors as Pilsbry have often missed them. These names are cited here in a format of "Pilsbry, *ex* Hemphill MS." The proper identification of authorship of taxa is crucial to decisions about type material (see below).

Authorship of some Hemphill taxa, particularly those in BINNEY (1886), has been difficult to interpret. Our decisions are based on a consideration of each appearance of each name with reference to the criteria of availability in *ICZN Code*, Art. 12. (The distinction between "Jones, *ex* Smith MS" versus "Smith, in Jones" has been discussed by COAN, 1972.)

Type localities: Hemphill is well known for reporting his localities in vague terms (PILSBRY, 1939:449), and it has been speculated that he did so to prevent other collectors from finding the habitats of some of his more unusual taxa. In a number of cases, his labels narrow down the localities; later malacologists have tracked down others.

Type material: Hemphill was a prodigious collector. He amassed huge lots, in part because he made money from the sale of duplicate material. As a result of his sales and exchanges, what must now be interpreted as type material of his taxa ended up in many institutions. His main per-

sonal collection was given to the California Academy of Sciences by his daughter, Mrs. Charlotte Hosmer (ANON., 1915). Large duplicate sets of specimens were purchased by Stanford University and are now housed with the rest of the Stanford mollusk collection at the California Academy of Sciences. He also sent many specimens to the U.S. National Museum of Natural History and to the Academy of Natural Sciences in Philadelphia. Others went to W. G. Binney, whose collections are in the American Museum of Natural History and the U.S. National Museum. Many type specimens are in the University of Colorado Museum in Boulder (WU & BRANDAUER, 1982), possibly obtained through Ida Shepard Oldroyd of Stanford University.

We have examined the material in the American Museum of Natural History, the California Academy of Sciences, the Santa Barbara Museum of Natural History, and the United States National Museum of Natural History. Arthur E. Bogan of the Academy of Natural Sciences of Philadelphia examined the collections under his care. The following published catalogues were consulted: H. B. BAKER (1962, 1964) and JOHNSON & BAKER (1973), Academy of Natural Sciences of Philadelphia; BROOKS & BROOKS (1931), Carnegie Museum, Pittsburgh; J. T. SMITH (1978), Stanford University; WILSON & KENNEDY (1967), San Diego Natural History Museum; WU & BRANDAUER (1982), University of Colorado Museum, Boulder. We have not tried to survey material in other institutions or still in private hands. In light of the fact that abundant type material has been found for most species, we did not make a careful survey of the large duplicate lots in the Stanford University collection.

Hemphill labeled a few lots in the California Academy of Sciences and the Stanford University collections as "types." However, he did not designate individual specimens as holotypes in any of his publications. We therefore regard his labeled "types" as syntypes; they are perhaps the best specimens from which lectotypes might be designated. Certain authors and curators have erroneously recognized Hemphill "holotypes" of species for which only syntypic lots exist.

Later authors have designated lectotypes for some of the taxa, in which case the rest of the type material are paralectotypes. (In one case, there are competing lectotype designations; the earliest takes precedence.)

Hemphill evidently returned to his productive localities repeatedly and collected additional material. Thus, in a number of cases there are more "syntypes" than the number of specimens he claimed he had in hand when he prepared his original descriptions. We have here merely indicated when this is the case, leaving the interpretation of this material and the selection of lectotypes to systematists working on the taxa involved.

If a name was made available by "Hemphill, in Pilsbry," for example, then the type material is all the specimens Hemphill had in hand when he named the species. If, on the other hand, a name was made available by

"Pilsbry, *ex* Hemphill MS," or the like, then the converse is the case: supposed Hemphill syntypes have no standing; the type material is only that which Pilsbry (or some other author) consulted.

Where we have examined and annotated the type material, we have called the specimens what we believe them to be, most often syntypes. Where we have not personally reviewed a museum's holdings, we have generally reported the type status assigned in that institution's register, adding quotation marks (as "paratypes") if our interpretation differs.

This review has resulted in the introduction of three nomenclatural changes:

(1) *Helminthoglypta tudiculata convicta* (Pilsbry, 1913, *ex* Hemphill MS) is a senior synonym of *H. t. angelena* Berry, 1938. *Helminthoglypta t. convicta* was based on specimens with the supraperipheral band very weakly developed. The type locality is recorded only as "Los Angeles County," but the holotype, paratype, and material labeled "*convicta*" by Hemphill in the California Academy of Sciences agree in all other respects with large lots of normally banded specimens that Hemphill collected at "Cerritos" [Signal Hill], California, within the range of the subspecies *H. t. angelena*. They were undoubtedly selected out of such lots.

(2) Authorship of *Helminthoglypta cuyamacensis* is to be attributed to Pilsbry (1895, *ex* Hemphill MS) rather than to Bartsch (1916, *ex* Hemphill MS). PILSBRY (1895) validated the name with a figure of the reproductive system. MILLER (1985:98) has collected probable topotypes of *H. cuyamacensis* and affirms PILSBRY's (1939) suggestion that the anatomy of *Epiphragmophora traski* var. *cuyamacensis* Pilsbry, 1895, and the shells of *E. cuyamacensis cuyamacensis* Bartsch, 1916, came from the same lot.

(3) *Monadenia fidelis flava* (Hemphill, 1892) is a senior synonym of *M. f. beryllica* Chace & Chace, 1935. *Monadenia f. flava* was based on bandless individuals. PILSBRY (1939:40) regarded it as representing "merely an albinistic or xanthic mutation . . . [which] may occur apparently in any *fidelis* colony," but the only extant type specimen, herein designated lectotype, is from within the range of *M. f. beryllica*, and it is the earliest available name for that subspecies.

Each entry in the following list consists of: (1) the name as originally proposed (except that capitalization has been normalized to modern practice), with authorship, date, and page and figure numbers (keyed to the bibliography); (2) the type locality, including refinements based on label data or subsequent authors' work; (3) the number of specimens if indicated in the original publication; (4) type material, including museum numbers, type status, and number of specimens (in parentheses); and (5) remarks, including current taxonomic assignment, notes on interpretation of authorship, and references to pertinent discussion elsewhere. References are provided in the bibli-

ography for all literature cited and for senior homonyms but not for junior or senior synonyms. (We have found that a number of supposed senior homonyms are really *nomina nuda* or are otherwise unavailable.)

The following abbreviations are used: AMNH, American Museum of Natural History; ANSP, Academy of Natural Sciences of Philadelphia; CAS, California Academy of Sciences; CASGTC, former numbers of the CAS Geology Type Collection; CM, Carnegie Museum; MCZ, Museum of Comparative Zoology, Harvard University; SBMNH, Santa Barbara Museum of Natural History; SDNHM, San Diego Natural History Museum; SUPTC, former numbers of the Stanford University Paleontology Type Collection; UCM, University of Colorado Museum; USNM, United States National Museum of Natural History, Smithsonian Institution.

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TAXONOMIC LISTING

Class Bivalvia

consanguineum "Prime," *Pisidium*—HEMPHILL, 1890f:20 [*nomen nudum*]. Nevada.

idahoensis, *Anodonta nuttalliana* var.—HEMPHILL, 1891a: 328–329, 337; pl. 10, figs. 3, 4. Spokane River above Post Falls, Kootenai Co., Idaho.

Type material—CAS 058856, syntypes (4), labeled "types" by Hemphill; ANSP 62757a, "figured holotype" (2 valves); ANSP 62757, "paratypes" (4 valves) (see JOHNSON & BAKER, 1973:158).

Remarks—Synonym of *Anodonta nuttalliana* Lea, 1838, according to BURCH (1975:165).

roseum "Prime," *Sphaerium*—HEMPHILL, 1890f:20 [*nomen nudum*]. Washington.

Remarks—Possibly a misspelling of *Cyclas rosacea* Prime, 1852.

subangulata, *Anodonta angulata* var.—HEMPHILL, 1891a: 325, 337; pl. 10, figs. 1, 2 [a primary homonym of *Anodon subangulata* ANTHONY, 1865:158–159, because these generic names are the same (ICZN Opinion 561, 1959)]. Russian River, Putah Creek, and Upper San Joaquin River, northern Calif.

Type material—CAS 058866, syntypes (3), from

Healdsburg, Sonoma Co., Calif., labeled "types" by Hemphill.

Remarks—Synonym of *Gonidea angulata* (Lea, 1838).

Class Gastropoda

aequisculpta, *Alvania*—HEMPHILL, 1875:3, ex Carpenter MS [*nomen nudum*].

Remarks—Made available by KEEP (1887) (COAN, 1985:212).

albida, *Helix* (*Mesodon*) *areolata* var.—HEMPHILL, 1890f: 17 [*nomen nudum*] [*non H. albida* COSTA, 1839: *Helix* 32]. Baja Calif.

albida, *Helix* *intercisa* var.—HEMPHILL, 1891a:330 [*non H. albida* COSTA, 1839: *Helix* 32] [HEMPHILL, 1890f: 17, *nomen nudum*]. San Clemente Id., Los Angeles Co., Calif.

Type material—CAS 058817, syntypes (7), labeled "types" by Hemphill; CAS 037578 (2), 037840 (2), syntypes; USNM 174540, syntypes (2); ANSP 10799, syntypes (3); AMNH 52117, syntypes (2).

Remarks—Synonym of *Xerarionta intercisa* (W. G. Binney, 1857). Not preoccupied by *Helix albida* RÖDING, 1798:107, a *nomen nudum*.

albida, *Helix kelleetti* var.—Hemphill, in W. G. BINNEY, 1890:220 [*non H. albida* COSTA, 1839: *Helix* 32]. Santa Catalina Id., Los Angeles Co., Calif.; 2 specimens.

Type material—Obviously also representing subsequent collecting: CAS 037311, syntypes (4), labeled "types" by Hemphill; CAS 037679, syntypes (4); ANSP 79744, syntypes (2).

Remarks—Synonym of *Xerarionta kelleetti* (Forbes, 1850).

albida, *Helix tryonii* var.—HEMPHILL, 1891a:332 [*non H. albida* COSTA, 1839: *Helix* 32] [HEMPHILL, 1890f: 17, *nomen nudum*]. Santa Barbara Id., Los Angeles Co., Calif.

Type material—CAS 032758 (4), 037698 (2), syntypes; USNM 174388–174394, syntypes (14); AMNH 52540, syntypes (4); UCM 20678, syntypes (13); SBMNH 33952, syntypes (7).

Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864).

albida, *Oreohelix* var.—HENDERSON & DANIELS, 1917:66, ex Hemphill MS [in synonymy of *O. haydeni hybrida* (Hemphill, 1890)].

albida, *Patula strigosa* var.—HEMPHILL, 1890d:17. Near Logan, Cache Co., Utah [Logan Canyon, 5000 ft. (labels)].

Type material—CAS 058875, lectotype (PILSBRY, 1939:494); CAS 058874, paralectotypes (6); USNM 363233, paralectotypes (24); AMNH 52914, paralectotypes (2); SBMNH 33933, paralectotypes (6).

Remarks—Synonym of *Oreohelix subrudis rugosa* (Hemphill, 1890), according to PILSBRY (1939:493–494).

albofasciata, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 31, 32, 47; pl. 2, figs. 3, 4. Banks of Bear River, near Brigham, Box Elder Co., Utah [4500 ft. (PILSBRY, 1939)].

Type material—USNM 102161 (1), 102163 (1), both "orig. type figd."; USNM 102162, "orig. type" (1); CAS 054513 (2), 054517 (2), 054520 (2), 054522 (2), 054586 (2), 054595 (2), syntypes; AMNH 53975, probable syntypes (4); AMNH 61688, syntypes (10 in 3 lots); UCM 20652, "paratypes" (43); SBMNH 33920 (10), 33922 (8), syntypes.

Remarks—Synonym ("color-var.") of *O. peripherica peripherica* (Ancey, 1881), according to PILSBRY (1939: 450–454; figs. 298-5, -18, -19).

avalonensis, *Oreohelix*—Hemphill, in PILSBRY, 1905:283, 284, 285; pl. 11, figs. 4–7. Santa Catalina Id., Los Angeles Co., Calif.

Type material—ANSP 86671a, "holotype"; ANSP 86671, "paratypes" (2); CAS 029012 (18), 032996 (4), syntypes; CAS 058942, ex SUPTC 6162, syntypes (51); USNM 174685, syntypes (6); UCM 20746 (8), 21273 (4), syntypes; SBMNH 33996, syntypes (9); CM 6160, syntypes (3); SDMNH 1376, syntypes (5).

Remarks—*Radiocentrum avalonense* (Hemphill, in Pilsbry, 1905). Hemphill later published a more formal description (HEMPHILL, 1911:104–108; pl. 4—as *Helix* var. *avalonensis*).

bicolor, *Helix kelleetti* var.—HEMPHILL, 1891a:334 [*non H. bicolor* J. ADAMS, 1800:4, 6; pl. 1, figs. 25–27] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif.

Type material—CAS 037172 (7), 037200 (3), 037201 (3), 037232 (4), 037233 (7), 037676 (5), syntypes; USNM 174442–174444, syntypes (6); AMNH 51891, syntypes (2).

Remarks—Synonym of *Xerarionta kelleetti* (Forbes, 1850).

bicolor, *Patula strigosa*—HEMPHILL, 1890a:133. Rathdrum, Kootenai Co., Idaho.

Type material—CAS 058864, lectotype (PILSBRY, 1939:424); CAS 050484 (4), 050492 (5), paralectotypes; ANSP 62387a (1), 62387 (1), paralectotypes; AMNH 53972, paralectotypes (4); SBMNH 33940, paralectotypes (8).

Remarks—Synonym of *Oreohelix strigosa strigosa* (Gould, 1846) and of its "form" *subcarnata* (Hemphill, 1890), according to PILSBRY (1939:419, 424). See also HANNA & SMITH (1939:386, 392; pl. 35, figs. 7–9).

binneyi, *Helix tudiculata* var.—Hemphill, in W. G. BINNEY, 1890:219–220. Mountains near San Diego, San Diego Co., Calif. [Balena, near San Diego (label)]; 1 specimen.

Type material—CAS 058862 (1), 062704 (1), syntypes, labeled "types" by Hemphill. PILSBRY (1939:72) calls the former "unique type."

Remarks—Synonym of *Helminthoglypta (H.) tudiculata tudiculata* (A. Binney, 1843).

binneyi, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 29, 31, 47; pl. 2, fig. 13. Bear River, N of Brigham, Box Elder and Cache cos., Utah [4500 ft. (PILSBRY, 1939)].

Type material—USNM 102172, "orig. type figd." (1); CAS 054449 (2), 054455 (2), 054510 (2), 054511 (2), 054584 (5), 054585 (2), 054588 (2), 054589 (2), 054591 (2), 054593 (2), 054519 (2), syntypes; AMNH 53976 (1), 61671 (7 in 2 lots), probable syntypes; SBMNH 33946, syntypes (37).

Remarks—Synonym ("color-var.") of *Oreohelix peripherica peripherica* (Ancey, 1881), according to PILSBRY (1939:450-454; figs. 298-1-3, -6-8, -11, -13-15, -24).

blandi, *Triodopsis mullani* var.—Hemphill, in W. G. BINNEY, 1892:184 [but not p. 203; pl. 2, fig. 6, according to PILSBRY (1939)] [HEMPHILL, 1890f:16, *nomen nudum*, as *Helix (Mesodon) devius* var.]. Post Falls, and banks of Salmon River, Kootenai Co., Idaho.

Type material—CAS 058841 (6), 058842 (6), syntypes from Post Falls, labeled "types" by Hemphill.

Remarks—Synonym of *Cryptomastix (C.) mullani mullani* (Bland & Cooper, 1861), according to VAGVOLGYI (1968:223) and MILLER *et al.* (1984:7).

buttonii, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1890:220. Box Elder Co., Utah [sandstone ledges, 4500-5000 ft. (labels)].

Type material—CAS 058871, lectotype (PILSBRY, 1939:439); CAS 058869 (1), 058870 (1), paralectotypes; CAS 050332 (5), 050333 (9), 050334 (6), 050335 (5), 050336 (7), 050338 (9), 050388 (5), paralectotypes; USNM 31211, paralectotypes (2); ANSP 10905, paralectotypes (3); AMNH 61672, paralectotypes (16 in 4 lots); SBMNH 33948, paralectotypes (8).

Remarks—*Oreohelix strigosa buttonii* (Hemphill), according to PILSBRY (1939:439-440; fig. 291).

californica, *Helix kelletii* var.—HEMPHILL, 1891a:333 [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif.

Type material—CAS 037191 (3), 037192 (5), 037197 (5), 037216 (5), 037220 (5), 037234 (6), 037577 (4), 037641 (7), 037648 (6), 037678 (6), syntypes; USNM 174457-174462, syntypes (12); AMNH 52548, syntypes (2); UCM 20671, "paratypes" (14).

Remarks—Synonym of *Xerarionta kelletii* (Forbes, 1850).

californica, *Helix tryonii* var.—HEMPHILL, 1891a:332 [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Barbara Id., Los Angeles Co., Calif.

Type material—CAS 037692, syntypes (5); USNM 174375-174377, syntypes (6); ANSP 10828 (1), 86799 (3), 86800 (2), 86801 (2), 86803 (2), syntypes; AMNH 52541, syntypes (4); UCM 20679, "paratypes" (10); SBMNH 33942, syntypes (9).

Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864).

carinata, *Micrarionta tryoni*—PILSBRY, 1939:221-222; fig. 110i-o, *ex* Hemphill MS. Santa Barbara Id., Los Angeles Co., Calif.

Type material—ANSP 86804a, holotype; ANSP 86804, paratype (1).

Remarks—Synonym of *Plesarionta tryoni hemphilli* (Edson & Hannibal, 1911). Pilsbry credited *M. t. carinata* to Hemphill, but Pilsbry alone was responsible for its publication. CLENCH & TURNER (1962:27) regarded it as a replacement name for *Helix tryonii subcarinata* Hemphill (*q.v.*), but Pilsbry expressly proposed it as a new subspecies.

carnea, *Patula strigosa* var.—HEMPHILL, 1890d:15-16. Near Salt Lake [City], Salt Lake Co., Utah [probably City Canyon (PILSBRY, 1939)].

Type material—CAS 050405 (11), 050420 (4), 050435 (11), syntypes; USNM 31169, possible syntypes (2); ANSP 10904a (1), 10904 (2), syntypes; AMNH 52770 (4), 52874 (6 in 2 lots), 61674 (2), syntypes; SBMNH 33949, syntypes (11).

Remarks—Synonym ("form") of *Oreohelix strigosa depressa* (Cockerell, 1890), according to PILSBRY (1939:429-430, 435; fig. 286). In HEMPHILL (1890f:15) and on his original labels, both MS and printed, it is "*corneus*" (*q.v.*).

castaneus, *Helix kelletii* var.—Hemphill, in W. G. BINNEY, 1890:220 [*non H. castanea* MÜLLER, 1774, vol. 2: 67-68]. Santa Catalina Id., Los Angeles Co., Calif.

Type material—CAS 037175 (6), 037176 (7), 037183 (6), 037193 (7), 037217 (4), 037221 (2), 037312 (6), 037674 (3), 037677 (2), 037681 (6), 037682 (7), syntypes; USNM 174415-174422, syntypes (16); AMNH 51893 (2), 52031 (2), syntypes.

Remarks—Synonym of *Xerarionta kelletii* (Forbes, 1850).

castaneus, *Helix ptychophorus* var.—HEMPHILL, 1890g:41 [*non H. castanea* MÜLLER, 1774, vol. 2:67-68] [HEMPHILL, 1890f:16, *nomen nudum*, as *H. townsendiana* var.]. Old Mission and Rathdrum, Kootenai Co., Idaho.

Type material—CAS 058851, syntypes (6) from Rathdrum; CAS 058852, syntypes (6) from Old Mission.

Remarks—Synonym of *Allogona ptychophora* (A. D. Brown, 1870), according to PILSBRY (1940:887-891; figs. 509g, h). See also A. G. SMITH (1943:544).

castaneus, *Helix [kelletii var.] redimita* var.—HEMPHILL,

- 1891a:334 [non *H. castanea* MÜLLER, 1774, vol. 2: 67–68] [HEMPHILL, 1890f:17, *nomen nudum*, as *H. kelletii* var. B]. San Clemente Id., Los Angeles Co., Calif.
- Type material—CAS 037790 (5), 037793 (5), 037804 (8), 037805 (2), 037810 (3), syntypes; USNM 174475–174480, syntypes (12); UCM 20668, “paratypes” (11).
- Remarks—Synonym of *Xerarionta redimita* (W. G. Binney, 1858).
- castaneus*, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 31, 32–33, 47 [as *castanea*]; pl. 2, figs. 11, 14. Banks of Bear River near Brigham, Box Elder Co., Utah [4500 ft. (PILSBRY, 1939)].
- Type material—CAS 058848, lectotype (HENDERSON, 1929b:223, 226; pl. 24, fig. 1); CAS 058849 (4), 058850 (4), paralectotypes; USNM 102167, “orig. type figd.” (1); AMNH 58621 (3), 61701 (2), probable paralectotypes.
- Remarks—Synonym (“color-var.”) of *Oreohelix peripherica peripherica* (Ancey, 1881), according to PILSBRY (1939:450–454; figs. 298–16, -17), who also stated (pp. 428–429) that material mentioned in Hemphill’s original description from Celilo, Sherman Co., Oregon, is referable to *O. strigosa variabilis* Henderson, 1929.
- catalinensis*, *Selenites duranti* var.—Hemphill, in W. G. BINNEY, 1890:221. Santa Catalina Id., Los Angeles Co., Calif.; 1 specimen.
- Type material—Undoubtedly also representing subsequent Hemphill collecting: CAS 058853, syntypes (4); CAS 058854, ex SUPTC 6196, syntypes (2), both lots labeled “types” by Hemphill; USNM 30506 (3), 38785 (2), 174084 (5), 174085 (2), possible syntypes; SBMNH 33954, possible syntypes (18).
- Remarks—*Haplotrema* (*H.*) *catalinense* (Hemphill, 1890), according to PILSBRY (1946:207–208; fig. 99).
- cayamacensis*, *Epiphragmophora* (*Helminthoglypta*) *traski* var.—see under *cayamacensis*, *E. (H.) traski* var.
- cedrosensis*, *Helix* (*Mesodon*) *areolata* var.—HEMPHILL, 1890f:17 [*nomen nudum*]. Baja Calif.
- celo*, *Micrarionta rufocincta* form—PILSBRY, 1939:206–207; fig. 103g, ex Hemphill MS. Santa Catalina Id., Los Angeles Co., Calif.
- Type material—ANSP 86653a, holotype; ANSP 86653, paratype (1).
- Remarks—Synonym of *Micrarionta rufocincta* (Newcomb, 1864). Pilsbry credited this form to Hemphill, but Pilsbry alone was responsible for its publication.
- clappi*, *Helix devia* var.—HEMPHILL, 1897:74–75. Salmon River Mts., Idaho Co., Idaho [Lucile (PILSBRY, 1939)].
- Type material—CAS 058821, syntypes (6), labeled “types” by Hemphill; USNM 46905 (4), 58574 (6), possible syntypes; ANSP 71479, syntypes (2).
- Remarks—*Cryptomastix* (*C.*) *mullani clappi* (Hemphill). Illustrated by PILSBRY (1940:868–869; fig. 503b, e).
- cockerelli*, *Anadenus*—Hemphill, 1890c:2–3. Cuyamaca Mts., San Diego Co., Calif. [Julian (label)].
- Type material—CAS 020570, syntypes (4), labeled “types” by Hemphill; USNM 120393, syntypes (3); ANSP 63895, syntype (1).
- Remarks—*Anadenulus cockerelli* (Hemphill), according to PILSBRY (1948:703–706; fig. 384).
- cognatus*, *Helix* (*Mesodon*) *devius* var.—HEMPHILL, 1890f: 16 [*nomen nudum*] [non *H. (Helicogena) cognata* FÉRUSSAC, 1821:36; FÉRUSSAC & FÉRUSSAC, 1821: pl. 44, fig. 4]. Oregon.
- columbiana*, *Fluminicola nuttalliana*—KEEP, 1887:63, ex Hemphill MS [HEMPHILL, 1881c:12, *nomen nudum*]. Rivers of Oregon and Washington.
- Type material—Not found.
- Remarks—*Fluminicola columbiana* Keep, 1887, according to BURCH (1982:22, 93; fig. 145), although he credited the species to “Hemphill, in Pilsbry” (1899: 121, 123, 125). Material in type collections, such as CAS 058880, CAS 058881 (ex SUPTC 5831), and ANSP 27767, was based on the assumption that Hemphill published the species and is without type status. See COAN (1985:212).
- columbiana*, *Physella*—KEEP, 1887:120, ex Hemphill MS [HEMPHILL, 1881c:12, *nomen nudum*]. Columbia River, Oregon/Washington.
- Type material—Not located.
- Remarks—*Physella columbiana* Keep, 1887, according to BURCH (1982:53, 159; fig. 639), who dated the species from HEMPHILL (1890e:27—in which it is “*Physa* var. *columbiana*”). Material that would have been types of the species if the species had been proposed first by Hemphill had been placed in some type collections (CAS 058939; CAS 058940, ex SUPTC 5806; CAS 058941, ex SUPTC 5807; ANSP 32940, 32941; and UCM 21826). See COAN (1985:212).
- columbiana*, *Pompholyx costata* var.—HEMPHILL, 1881c:12 [*nomen nudum*]. No locality given.
- concurus*, *Helix dupetithouarsi*—PILSBRY, 1924:55, ex Hemphill MS [in synonymy of *Helminthoglypta umbilicata* (Pilsbry, 1898)]. Morro Bay, San Luis Obispo Co., Calif.
- Remarks—See PILSBRY (1939:132–135; fig. 67). BAKER (1962:6) reported a “holotype” in the ANSP (#112425a), but it is without type status because the name was never made available.
- convicta*, *Epiphragmophora tudiculata*—PILSBRY, 1913, ex Hemphill MS. San Diego Co. [Los Angeles Co. (label; corrected by PILSBRY, 1939)], Calif.
- Type material—ANSP 86896a, holotype; ANSP 86896, paratype (1). The CAS had Hemphill material

in its type collection, but it is doubtful that Pilsbry saw it.

Remarks—*Helminthoglypta* (*H.*) *tudiculata convicta* (Pilsbry, 1913), and a senior synonym of *Helminthoglypta tudiculata angelena* Berry, 1938 (**new synonymy herein**; see Introduction). PILSBRY (1939:73–75; figs. 43b, b'), credited *convicta* to Hemphill, but Pilsbry alone was responsible for its publication.

corneus, *Helix strigosa* var.—HEMPHILL, 1890f:15 [*nomen nudum*] [*non H. cornea* LINNAEUS, 1758:770]. No locality given.

Remarks—A variant spelling of *Oreohelix strigosa depressa* form *carnea* (Hemphill), according to PILSBRY (1939:430, 435) (*q.v.*).

costata, *Pompholyx*—STEARNS, 1901:291, *ex* Hemphill MS [HEMPHILL, 1881c:12, *nomen nudum*; HEMPHILL, 1890f:19, *nomen nudum*, as *Pompholyx effusa* var.]. Near the Dalles, Columbia River, Oregon/Washington.

Type material—USNM 36616 (4), 36617 (2), 47519–47521 (11), possible syntypes.

Remarks—*Parapholyx effusa costata*, according to F. C. BAKER (1945:164, 466–469; pl. 115, figs. 24–26; pl. 116, figs. 12–14), who credited the species to Hemphill. The name appeared in DALL (1883:202), where we regarded it as being in synonymy because it is not at all clear that Dall thought it separable. It is also a *nomen nudum* in CALL (1884:19). Material in collections labeled as being Hemphill types, including UCM 13023, 13023a (the former termed “syntypes” and the latter “designated as the type” by HENDERSON, 1929a:81–82), CAS 058882, *ex* SUPTC 5824, and ANSP 21871, 21873, 21877, 21884, is without type status because the name was validated by Stearns.

cuyamacensis, *Epiphragmophora traski* var.—PILSBRY, 1895: 197, 199, 362; pl. 59, fig. 87), *ex* Hemphill MS [spelled *cuyamacensis* on pp. 197 and 362; **first revision herein**] [HEMPHILL, 1890f:17, *nomen nudum*, as *Helix* (*Mesodon*) *fidelis* var.]. Cuyamaca Mts., San Diego Co., Calif. (PILSBRY, 1939:145).

Type material.—ANSP 62381a, holotype (animal & shell); ANSP 62381, paratypes (12).

Remarks—*Helminthoglypta* (*Rothelex*) *cuyamacensis cuyamacensis* (Pilsbry, 1895). The name *Epiphragmophora cuyamacensis cuyamacensis* was later proposed by BARTSCH (1916:611, 619; pl. 16, figs. 10–12; pl. 17, fig. 8), *ex* Hemphill MS, who believed that it had not yet been made available, and even PILSBRY (1939) accepted this view. However, PILSBRY's illustration in 1895 suffices to make the name available, and, although he credited the name to Hemphill, he alone was responsible for its publication. See also MILLER (1985:98).

dentata, *Helix* (*Mesodon*) *columbiana* var.—HEMPHILL, 1890f:16 [*nomen nudum*] [*non Mesodon columbiana* var. *dentata* TRYON, 1867:42; pl. 8, fig. 12, nor *M.*

albolabris var. *dentata* TRYON, 1867:39; pl. 7, fig. 6]. Calif.

depressus, *Helix* (*Mesodon*) *columbiana* var.—HEMPHILL, 1890f:16 [*nomen nudum*] [*non H. depressa* MONTAGU, 1803:439–440; pl. 13, fig. 5]. Oregon.

Remarks—Probably what was later named *Vespericola columbiana depressa* (Pilsbry & Henderson, 1936) (see PILSBRY, 1940:895–896; fig. 514).

diegoensis, *Zonites*—Hemphill, in W. G. BINNEY, 1892: 168, 203; pl. 3, fig. 2. Near Julian City, and on Cuyamaca Mt., 4500 ft., both San Diego Co., Calif.

Type material—Not found.

Remarks—In spite of the original figure, this species has not been recognized since its description; PILSBRY (1948:653) placed it with doubt under the genus *Punctum* and commented that the figure somewhat resembled *P. californicum* Pilsbry, 1898. The only specimens we have found that in any way document Hemphill's concept of the species are two adult *Paralaoma caputspinulae* (Reeve, 1852) (CAS 058467) with a label in Hemphill's writing: “*Zonites diegoensis?*/Hemphill/Near Julian City/San Diego Co. Cal.” They are lower spired, less globose, more strongly sculptured than the original figure, which, however, could be taken to represent a juvenile *Paralaoma caputspinulae*. Additional field work in the type areas is needed to resolve the identity of *Z. diegoensis*.

ductor, *Micrarionta intercis* form—PILSBRY, 1939:224, 225; figs. 111h, i, *ex* Hemphill MS. San Clemente Id., Los Angeles Co., Calif.; fossil.

Type material—ANSP 86747a, holotype; ANSP 86747 (1), 86748 (2), 86749 (2), 86750 (2), 86751 (2), paratypes.

Remarks—Pilsbry credited this synonymic “form” of *Xerarionta intercis* to Hemphill, but Pilsbry himself was responsible for making the name available. KANAKOFF (1950:82) regarded it as a form of *X. redimita* (W. G. Binney, 1858).

elegans, *Helix intercis* var.—HEMPHILL, 1891a:330 [*non H. elegans* GMELIN, 1791:3642] [HEMPHILL, 1890f: 17, *nomen nudum*]. San Clemente Id., Los Angeles Co., Calif.

Type material—CAS 037569 (2), 037572 (7), syntypes; CAS 058883, *ex* SUPTC 6200, syntypes (4); ANSP 10807, syntypes (3); AMNH 52539, syntypes (2).

Remarks—Synonym of *Xerarionta intercis* (W. G. Binney, 1857).

fasciata, *Helix tryonii* var.—HEMPHILL, 1891a:332 [*non H. fasciata* GMELIN, 1791:3646] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Barbara Id., Los Angeles Co., Calif.

Type material—CAS 032737, syntypes (6); USNM

174369–174574, syntypes (12); AMNH 52042 (2), 52542 (2), syntypes; UCM 20681, “paratypes” (13); SBMNH 33953, syntypes (9).

Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864). Not a primary homonym of *Cochlea fasciata* DA COSTA, 1778:76–78; pl. 5, figs. 1–5, 8, 14, 19), although *Cochlea* is a synonym of *Helix*.

feralis, *Helix* var. [also as *H. ruficincta feralis*]—HEMPHILL, 1901b:121, 124; pl. 1, fig. 2. San Nicolas Id., Ventura Co. (35 specimens), & Santa Barbara Id., Los Angeles Co. (10 specimens), Calif.

Type material—CAS 058823 (11), syntypes from San Nicolas Id., labeled “types” by Hemphill; CAS 061482 (8), syntypes from Santa Barbara Id., labeled “types” by Hemphill; USNM 174250–174252 (6), 174263–174272 (20), syntypes from San Nicolas Id.; USNM 174254–174262 (18), syntypes from Santa Barbara Id.; SBMNH 33925 (15), 33943 (2), syntypes from San Nicolas Id. Obviously, some of this material was from later collecting.

Remarks—*Micrarionta feralis* (Hemphill, 1901). See PILSBRY (1939:209–211; fig. 105).

flavus, *Aglaja fidelis* var.—Hemphill, in W. G. BINNEY, 1892:185. Chehalis, Lewis Co., and San Juan Ids., San Juan Co., Wash.; Port Orford, Curry Co., Oregon.

Type material—CAS 058840, lectotype (herein), from Port Orford, Oregon, labeled “type” by Hemphill.

Remarks—*Monadenia* (*M.*) *fidelis flava* (Hemphill, 1892) and a senior synonym of *M. fidelis beryllica* Chace & Chace, 1935 (new synonymy herein). The lectotype, from the third locality mentioned by Hemphill, is the only extant type specimen, and it was accepted as the “type” by PILSBRY (1939:40).

floridana, *Polygyra septemvoluta* var.—Hemphill, in W. G. BINNEY, 1892:184–185. Oyster [Estero] Bay, Lee Co., Florida.

Type material—CAS 058839, syntypes (2), labeled “types” by Hemphill.

Remarks—*Polygyra* (*P.*) *cereolus floridana* Hemphill, 1892, according to PILSBRY (1940:586–587; fig. 380).

forbesi, *Helix kelletti* var.—HEMPHILL, 1891a:333 [non *H. forbesii* PFEIFFER, 1845:71–72] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif.

Type material—CAS 037643 (4), 037646 (5), 037665 (4), 037669 (5), syntypes; USNM 174436–174441, syntypes (12); AMNH 52550, syntypes (2); SBMNH 33927, probable syntypes (2).

Remarks—Synonym of *Xerarionta kelletti* (Forbes, 1850).

fragilis, *Patula strigosa* var.—HEMPHILL, 1890d:17–18. Near Franklin, Franklin Co., Idaho; among red sandstone [5000 ft. (label)].

Type material—CAS 058863, lectotype (PILSBRY, 1939:438); CAS 050462 (5), 050464 (3), 050465 (5), 050467 (1), 050468 (4), 050472 (6), paralectotypes; USNM 31164–31165 (4), 58357 (3), 58431 (2), paralectotypes; ANSP 10901, paralectotypes (3); AMNH 61675 (4 in 2 lots), 61686 (2), paralectotypes; SBMNH 33937, paralectotypes (16).

Remarks—PILSBRY (1934:408; 1939:438–439, fig. 289) recognized this as a subspecies of *Oreohelix strigosa*, whereas HANNA & SMITH (1939:389, 392; pl. 36, figs. 4–6) regarded it as a distinct species.

frater, *Helix kelletti* var.—HEMPHILL, 1891a:333 [non *H. (Cochlostyla) frater* FÉRUSSAC, 1821:52; FÉRUSSAC & FÉRUSSAC, 1821:pl. 112, figs. 1, 2] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif. [Isthmus (label)].

Type material—CAS 037195 (4), 037206 (9), 037229 (5), 037667 (5), 037671 (5), 037675 (5), syntypes; USNM 174451–174456, syntypes (12); ANSP 86582 (2), 86583 (2), 86584 (2), syntypes; AMNH 52032, syntypes (2); UCM 20674, “paratypes” (15); SBMNH 33926, probable syntypes (4).

Remarks—Synonym of *Xerarionta kelletti* (Forbes, 1850).

gabbiana, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 30, 34, 47; pl. 2, fig. 9 [HEMPHILL, 1878:2, *nomen nudum*, as *P. haydeni* var.]. Near Salt Lake City, Salt Lake Co., Utah; in a rock pile.

Type material—USNM 102166, “figd type” (1); CAS 054333 (6), 054336 (7), 054341 (3), 054469 (7), syntypes; AMNH 35983 (1), 61703 (2), syntypes; AMNH 35162, probable syntypes (10).

Remarks—Synonym (“form”) of *Oreohelix haydeni oquirrhensis* (Hemphill, in Binney, 1886), according to PILSBRY (1939:464–465, 469–471; figs. 304j, k).

gouldi, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 31, 32, 47; pl. 2, figs. 5, 16. Banks of Bear River, N of Brigham, Box Elder Co., Utah [4500 ft. (PILSBRY, 1939)]; 1000 specimens.

Type material—USNM 102165, “orig. type figd.” (1); CAS 054454 (6), 054523 (2), 054524 (3), 054582 (2), 054587 (2), syntypes; AMNH 56573, syntypes (2); AMNH 61675 (12), 61676 (4), probable syntypes; SBMNH 33947, syntypes (22).

Remarks—Synonym (“size-var.”) of *Oreohelix peripherica peripherica* (Ancey, 1881), according to PILSBRY (1939:450–454; fig. 298–22).

hemphilliana “Binney,” *Helix*—HEMPHILL, 1881c:11 [*nomen nudum*]. No locality given.

holzneri, *Haliotis cracherodii* var.—HEMPHILL, 1907:59–60. Coast of Baja Calif. [presumably northern]; 3 specimens.

Type material—SDNHM 45587, syntypes (3); CAS 058826, possible syntype, labeled “type” by Hemphill,

but this may be a specimen added to his collection later because the SDNHM specimens match the dimensions given by Hemphill.

Remarks—Synonym of *H. cracherodii* Leach, 1814, according to J. H. McLean (personal communication, 26 Jan. 1985).

hybrida, *Helix* [*kelletti* var.] *redimita* var.—HEMPHILL, 1891a:334 [non *H. hybrida* POIRET, 1801:71] [HEMPHILL, 1890f:17, *nomen nudum*]. San Clemente Id., Los Angeles Co., Calif.

Type material—CAS 037787 (6), 037788 (4), 037806 (7), 037809 (5), syntypes; USNM 174469–174474, syntypes (12); AMNH 51894, syntypes (2); UCM 20669, “paratypes” (16).

Remarks—Synonym of *Xerarionta redimita* (W. G. Binney, 1858).

hybrida, *Patula strigosa* var.—HEMPHILL, 1890d:17. Near Logan, Cache Co., Utah [Logan Canyon; about 5000 ft. (labels)].

Type material—CAS 054531 (7), 054532 (13), 054533 (6), syntypes; ANSP 23058, syntypes (3); AMNH 61678, syntypes (6 in 2 lots); SBMNH 33951, syntypes (7). Some additional lots in the USNM from Hemphill placed under this name but not individually labeled as such may also be syntypic.

Remarks—*Oreohelix haydeni hybrida* (Hemphill, 1890), according to PILSBRY (1939:464–469; figs. 340c–f).

hybrida, *Selenites vancouverensis* var.—HEMPHILL, 1890g:42–43 [HEMPHILL, 1890f:13, *nomen nudum*, as *S. concava* var.]. Astoria, Clatsop Co., Oregon.

Type material—CAS 058846, syntypes (4), labeled “types” by Hemphill; AMNH 52883, syntypes (2).

Remarks—Synonym of *Haplotrema (Ancotrema) hybridum* (Ancey, 1888) (B. Roth, in preparation). Ancey did not credit his proposal of this name to Hemphill, but the name probably came to his attention on a Hemphill label.

inconstans, *Micrarionta redimita* form—PILSBRY, 1939:219, 220; figs. 109f–i, ex Hemphill MS. San Clemente Id., Los Angeles Co., Calif.

Type material—ANSP 86761a, holotype; ANSP 86761, paratype (1).

Remarks—Synonym of *Xerarionta redimita* (W. G. Binney, 1858). Pilsbry credited this form to Hemphill, but Pilsbry alone was responsible for publishing it.

intermedia, *Micrarionta facta* form—PILSBRY, 1939:209–210; fig. 105e, ex Hemphill MS. Santa Barbara Id., Los Angeles Co., Calif.

Type material—ANSP 86840, “type and paratype” (2); 86641 (2), 86841 (2), paratypes.

Remarks—*Micrarionta intermedia* Pilsbry, 1939. Pilsbry credited this name to Hemphill, but Pilsbry alone was responsible for its publication. Supposed type

material in other institutions was probably not studied by Pilsbry.

intersum, *Patula strigosa* var.—HEMPHILL, 1890a:135.

Bluffs along the banks of Little Salmon River, Idaho Co., Idaho; in stone piles; rare.

Type material—SBMNH 33929, lectotype (BERRY, 1932:62; figs. 9, 10); SBMNH 33930, paralectotypes (12); CAS 058867, “lectotype” (PILSBRY, 1939:496); CAS 054557 (7), 054558 (8), 054561 (9), paralectotypes; USNM 363248, paralectotypes (4); AMNH 61704 (2), 61705 (2), paralectotypes.

Remarks—*Oreohelix intersum* (Hemphill, 1890). See BERRY (1932:62), HANNA & SMITH (1939:388–389; pl. 36, figs. 1–3), and SOLEM (1975:29–30).

jugalis, *Patula strigosa* var.—HEMPHILL, 1890a:134. Banks of Salmon River, Idaho Co., Idaho; in stone piles [Lucile (PILSBRY, 1934:398)].

Type material—ANSP 62372a, lectotype (PILSBRY, 1934:398); ANSP 62372, paralectotype (1); ANSP 62386 (2), 62391 (2), probable paralectotypes; CAS 053553 (5), 054555 (7), 054556 (6), 058859 (1), paralectotypes; USNM 363251, paralectotypes (5); AMNH 53977 (2), 61679 (2), 61680 (2), paralectotypes; SBMNH 33935 (4), 33936 (9), paralectotypes.

Remarks—*Oreohelix jugalis* (Hemphill, 1890). See PILSBRY (1939:496–497; fig. 322) and SOLEM (1975:27–28; figs. 6a, 7b, 31–36).

keepi, *Selenites vancouverensis* var.—HEMPHILL, 1890g:42 [HEMPHILL, 1890f:13, *nomen nudum*, as *S. concava* var.]. Hills near Oakland, Alameda Co., Calif.; 1 specimen.

Type material—Clearly also representing later collecting by Hemphill: CAS 058847, syntypes (5), labeled “types” by Hemphill; ANSP 77894, syntypes (2); SBMNH 33921, syntypes (2).

Remarks—*Haplotrema (Greggiella) keepi* (Hemphill, 1890), according to PILSBRY (1946:213–214; figs. 104, 108–4, -5).

kelseyi, *Circinaria* var.—HEMPHILL, 1911:103–104; pl. 3. San Mateo Co. (?1 specimen); San Luis Obispo Co. (22 specimens), both Calif.

Type material—Obviously also representing subsequent collecting: CAS 058836 (3), 058837 (5), syntypes from San Mateo.

Remarks—Synonym (“var.”) of *Haplotrema (Ancomena) minimum* (Ancey, 1888), according to PILSBRY (1946:218–221; fig. 107e).

kelseyi, *Oreohelix*—PILSBRY, 1934:408, ex Hemphill MS [in synonymy of *O. pygmaea* Pilsbry, 1913]. Raymond, Big Horn Co., Wyoming.

Remarks—Material in type collections, such as UCM 7063, has no type status because the name was never made available.

labiosa, *Micrarionta rufocincta* form—PILSBRY, 1939:206–207; figs. 103h, i, *ex* Hemphill MS. Santa Catalina Id., Los Angeles Co., Calif.

Type material—ANSP 86665a, holotype; ANSP 86665 (1), 86656 (2), 86657 (2), 86658 (2), 86659 (2), paratypes.

Remarks—Synonym of *Micrarionta rufocincta* (Newcomb, 1864). Pilsbry credited this “form” to Hemphill, but Pilsbry himself was responsible for its publication.

lactea, *Patula strigosa* var.—HEMPHILL, 1890a:134. Rathdrum, Kootenai Co., Idaho; open places in dense pine forests.

Type material—CAS 058857, lectotype (PILSBRY, 1939:424); CAS 050486, paralectotypes (4); ANSP 62390, paralectotypes (2); AMNH 52771, paralectotypes (2).

Remarks—Synonym of *Oreohelix strigosa strigosa* (Gould, 1846), according to PILSBRY (1939:419, 424).

leai, *Goniobasis plicifera* var.—HEMPHILL, 1890f:18 [*nomen nudum*]. Oregon.

Remarks—Material in type collections, such as UCM 17779 and 17780, has no type status because the name was never made available.

maculata, *Helix tryonii* color var.—HEMPHILL, 1901b:123, 124 [*non Helix (Carocolla) maculata* ANTON, 1839:40]. Santa Barbara Id., Los Angeles Co., Calif.

Type material—USNM 174378–174383, syntypes (12); UCM 20685, “paratypes” (14).

Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864).

major, *Epiphragmophora traskii*—BARTSCH, 1916:612, *ex* Hemphill MS [in synonymy of *E. traskii traskii* (Newcomb, 1861)].

Remarks—Material formerly in type collections has no type status because the name was never made available.

major, *Helix tryonii*—HEMPHILL, 1901b:123, 124; pl. 1, fig. 1, two center specimens [*non H. major* A. BINNEY, 1837:473–475; pl. 12]. San Nicolas Id., Ventura Co., Calif.; subfossil.

Type material—CAS 058873, syntypes (2), labeled “types” by Hemphill; USNM 174297–174299 (6), 174308–174310 (6), syntypes; SBMNH 33923, syntypes (16).

Remarks—Synonym of *Plesarionta tryoni hemphilli* (Edson & Hannibal, 1911).

meridionalis “Sterki,” *Pupa (Pupilla) californica* var.—HEMPHILL, 1890f:17 [*nomen nudum*]. Calif.

minor, *Helix intercis*a var.—HEMPHILL, 1891a:330 [*non H. epistylum minor* C. B. ADAMS, 1851:97] [HEMPHILL, 1890f:17, *nomen nudum*]. San Clemente Id., Los Angeles Co., Calif.

Type material—CAS 037341 (6), 037626 (2), syn-

types; USNM 174524–174525, syntypes (4); ANSP 10805, syntypes (3); AMNH 51963, syntypes (2).

Remarks—Synonym of *Xerarionta intercis*a (W. G. Binney, 1857).

minor, *Helix (Mesodon) rufocincta* [*sic*] var.—HEMPHILL, 1890f:17 [*nomen nudum*] [*non H. epistylum minor* C. B. ADAMS, 1851:97]. Calif.

minor, *Helix tryonii*—HEMPHILL, 1901b:123, 124; pl. 1, fig. 1, two outer specimens [*non H. epistylum minor* C. B. ADAMS, 1851:97]. San Nicolas Id., Ventura Co., Calif.; subfossil.

Type material—CAS 058819, syntypes (8), labeled “types” by Hemphill; CAS 037701 (5), 037710 (5), syntypes; USNM 174302–174305, syntypes (8).

Remarks—Synonym of *Plesarionta tryoni hemphilli* (Edson & Hannibal, 1911).

morroensis, *Helix* var.—HEMPHILL, 1911:103. San Luis Obispo Co., Calif.; among brush and rocks [near city of San Luis Obispo (ROTH, 1973)].

Type material—Obviously also representing later Hemphill collecting: CAS 058820, syntypes (11), labeled “types” by Hemphill; USNM 174683 (2) [“near Morro”], 174684 (2) [“near San Luis Obispo”], syntypes; UCM 20179, “paratypes” (4); SBMNH 33934, syntypes (6).

Remarks—*Helminthoglypta (H.) walkeriana morroensis* (Hemphill, 1911).

multicostata, *Patula strigosa* var.—W. G. BINNEY, 1886:27, 32, 47; pl. 2, fig. 6, *ex* Hemphill MS. Box Elder Co., Utah [Bear River, N of Brigham; 4500 ft. (PILSBRY, 1939)].

Type material—USNM 102168, “orig. type figd.” (1); AMNH 53974 (6), 56572 (5), 61584 (8), 61684 (10 in 3 lots), syntypes.

Remarks—Synonym (“color-var.”) of *Oreohelix peripherica peripherica* (Ancey, 1881), according to PILSBRY (1939:450–454; figs. 298-4, -10, -12, -20–23. Because we interpret this form as having been made available solely by Binney, other material in collections from the type lot does not have standing as syntypes, including CAS 054452, 054453, 054515, 054525, 054526, 054590; UCM 20654; SBMNH 33945.

multilineatus, *Helix kelletti* var.—HEMPHILL, 1891a:333 [*non H. multilineatus* SAY, 1821:150] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif. [Isthmus (labels)].

Type material—CAS 037166 (2), 037168 (7), 037202 (6), 037205 (6), 037227 (6), 037639 (6), 037645 (6), 037647 (6), 037662 (6), 037688 (6), syntypes; USNM 174430–174435, syntypes (11); AMNH 51895, syntypes (2).

Remarks—Synonym of *Xerarionta kelletti*i (Forbes, 1850).

- nebulosa*, *Helix tryonii* var.—HEMPHILL, 1891a:331 [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Barbara Id., Los Angeles Co., Calif.
Type material—CAS 032735 (6), 037695 (6), syntypes; USNM 174354–174359, syntypes (12); AMNH 51961 (2), 52543 (2), 52573 (2), syntypes; SBMNH 33931, syntypes (10).
Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864). Not preoccupied by *Helix nebulosa* Ziegler, in ROSSMÄSSLER, 1837:31, which is in synonymy. We have not located any other preoccupying use of this specific name in *Helix*.
- nepos*, *Helix intercisa* var.—HEMPHILL, 1891a:330 [HEMPHILL, 1890f:17, *nomen nudum*]. San Clemente Id., Los Angeles Co., Calif.
Type material—CAS 037571 (2), 037611 (4), syntypes; CAS 058835, *ex* SUPTC 6201, syntypes (4); USNM 174534–174539, syntypes (12); ANSP 86539 (2), 86540 (2), 86541 (2), syntypes; AMNH 51962 (2), syntypes; SBMNH 33955, syntypes (9).
Remarks—Synonym of *Xerarionta intercisa* (W. G. Binney, 1857).
- neritoides*, *Parapholix effusa*—F. C. BAKER, 1945:468–469; pl. 116, figs. 7–11, *ex* Hemphill MS. The Dalles, Columbia River, Oregon.
Type material—USNM 36615 (2), 37518 (3), syntypes; ANSP 21883 (3), syntypes; ANSP 21872 (6), possible syntypes.
Remarks—*Vorticifex neritoides* (F. C. Baker, 1945), according to D. W. Taylor (*in litt.*, 11 Feb. 1985). Baker credited this species to Hemphill, but Baker alone was responsible for publishing it.
- newcombi*, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 30, 32, 47; pl. 2, fig. 8. Mts. N of Ogden [Weber Co.], Utah; steep sides of a gulch facing N.
Type material—USNM 102171, “orig. type figd.” (1); CAS 050280 (2), 050283 (2), 050284 (2), syntypes.
Remarks—*Oreohelix peripherica newcombi* (Hemphill, 1886), according to PILSBRY (1939:455–456; fig. 300a).
- newcombiana*, *Paludinella*—HEMPHILL, 1877:49. Humboldt Bay, Humboldt Co., Calif.; abundant in salt marshes.
Type material—CAS 058872, *ex* SUPTC 6241, syntypes (7); USNM 32725 (1), 127340 (1 “figd.” + 9), syntypes; UCM 20878 (12), 23545 (3), “paratypes”; SDNHM 780 (3), 780A (34), syntypes; SBMNH 33995, syntypes (4).
Remarks—Type species of *Algamorda* DALL, 1918: 137. *Littorina (Algamorda) newcombiana* (Hemphill, 1877), according to D. W. Taylor (*in litt.*, 11 Feb. 1985). *Assimineae subrotundata* Carpenter, 1864, may prove to be a senior synonym, though either or both may be an introduced Atlantic *Littorina*, perhaps *L. saxatilis* (Olivi, 1792). J. T. Carlton, *in litt.*, 8 April 1985).
- nitidus*, *Helix kelletii* var.—HEMPHILL, 1891a:333 [*non* *H. nitidus* MÜLLER, 1774:32] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif.
Type material—CAS 037184 (5), 037207 (6), 037226 (6), 037553 (4), 037666 (6), 037680 (6), 037687 (6), syntypes; USNM 174445–174450, syntypes (12); AMNH 51892, syntypes (2).
Remarks—Synonym of *Xerarionta kelletii* (Forbes, 1850).
- occidentalis*, *Eulimella* [also as *Bulimulus*]—HEMPHILL, 1894:395–396. San Diego, San Diego Co., Calif.; intertidal zone; mudflats; 20 specimens.
Type material—Probably also representing later collecting: CAS 058876, syntypes (6); CAS 058877, *ex* SUPTC 6248, syntypes (9); USNM 127551, syntypes (6).
Remarks—*Schwengelia occidentalis* (Hemphill, 1894), according to J. H. McLean (personal communication, 26 Jan. 1985).
- occidentalis*, *Limnaea stagnalis* var.—HEMPHILL, 1890e:26. Lake Whatcom, Whatcom Co., Wash.; Nov. 1889; 15–20 specimens.
Type material—CAS 058834, *ex* SUPTC 5817, syntypes (4); USNM 118791, syntypes (2); ANSP 62297, syntypes (3).
Remarks—*Limnaea occidentalis* Hemphill, 1890, according to MCDONALD (1969:13; pl. 1, fig. f).
- occidentalis*, *Selenites concavus* var. [also under *S. vancouverensis*]—Hemphill, in W. G. BINNEY, 1892:165 [HEMPHILL, 1890f:13, *nomen nudum*]. Sonoma Co. to Santa Cruz Co., Calif.
Type material—CAS 051890, syntypes (17), from near Fish Ranch, Contra Costa Co., Calif.
Remarks—Synonym of *Haplotrema (Ancomena) minimum* (Ancey, 1888), according to PILSBRY (1946:218–219).
- oquirrhensis*, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 30, 34, 47; pl. 2, fig. 12 [HEMPHILL, 1878:2, *nomen nudum*, as *P. hemphilli* var.]. Oquirrh Mts., Salt Lake Co., Utah; limestone [4300 ft. (label)].
Type material—CAS 054337 (6), 054338 (15), 054342 (6), 054344 (2), 054345 (8), 054404 (2), 054406 (2), 054545 (7), syntypes; USNM 102164, syntype (1); ANSP 23052, syntypes (3); AMNH 56606 (2), 61683 (6 in 2 lots), syntypes; SBMNH 33944, syntypes (6). PILSBRY’s (1939) reference to Binney’s figure as “representing the type” cannot be taken as a lectotype designation.
Remarks—*Oreohelix haydeni oquirrhensis* (Hemphill,

- 1886), according to PILSBRY (1939:469–471; figs. 304g–i).
- oregonensis*, *Helix (Mesodon) mullani* var.—ANCEY, 1882: 29, ex Hemphill MS [non *H. oregonensis* LEA, 1838: 100–101; pl. 23, fig. 85]. Eastern Oregon.
Type material—Not searched. CASGTC 4104–4115 were labeled “syntypes” of Hemphill’s species, but they were probably never seen by Ancey.
Remarks—Synonym of *Cryptomastix (Bupiogona) hendersoni* (Pilsbry, 1928). See PILSBRY (1940:866–867) and WEBB (1970:77–78).
- parma*, *Patula strigosa* var.—HEMPHILL, 1890d:17. Near Spokane Falls, Spokane Co., Washington.
Type material—CAS 058861, syntypes (2); ANSP 10898a, “holotype”; ANSP 10898, syntypes (5); AMNH 53973, syntypes (3); SBMNH 33956, syntypes (2).
Remarks—Synonym of *Oreohelix strigosa strigosa* (Gould, 1946), according to PILSBRY (1939:419–424). See also HANNA & SMITH (1939:384, 387, 391; pl. 33, figs. 7–9; pl. 34, figs. 1–3).
- penicillata*, *Physa heterostropha* var.—HEMPHILL, 1890f:19 [nomen nudum]. Calif.
- picta*, *Patula strigosa* var.—HEMPHILL, 1890d:16. Rathdrum, Kootenai Co., Idaho.
Type material—CAS 058860, lectotype (PILSBRY, 1939:424); ANSP 62284a (1), 62284 (1), paralectotypes; AMNH 53978, probable paralectotypes (2).
Remarks—Synonym of *Oreohelix strigosa strigosa* (Gould, 1846), according to PILSBRY (1939:419–421, 424). See also HANNA & SMITH (1939:384, 388, 391; pl. 34, figs. 7–9).
- pilsbryi*, *Limnaea (Leptolimnaea)*—HEMPHILL, 1890e:25–26. Fish Spring[s], Juab Co., “Nevada” [Utah, according to TAYLOR *et al.* (1963)]; June 1868; a few specimens.
Type material—ANSP 62293, syntypes (3).
Remarks—*Stagnicola (Hinkleyia) pilsbryi* (Hemphill, 1890), according to TAYLOR *et al.* (1963:262–263, 265–266; pl. II, fig. 1).
- proles*, *Arionta traski* var.—HEMPHILL, in W. G. BINNEY, 1892:187 [HEMPHILL, 1890f:17, nomen nudum, as *Helix (Mesodon) fidelis* var.]. Near Fraser’s Mill [Mountain Home], Tulare Co., Calif. [6280 ft. (PILSBRY, 1939)].
Type material—SBMNH 33938, lectotype (BERRY, 1938:47, 51; figs. 11, 12); SBMNH 33939, paralectotypes (2); CAS 058816, paralectotypes (8), labeled “types” by Hemphill.
Remarks—*Helminthoglypta (H.) proles* (Hemphill, 1892). Illustrated by PILSBRY (1939:196–197; figs. 99a, b). Some authors have dated this species from BARTSCH (1916:616, 619; pl. 116, figs. 4–6).
- puer*, *Micrarionta intercisa* form—PILSBRY, 1939:224, 225; fig. 111-l, ex Hemphill MS. San Clemente Id., Los Angeles Co., Calif.; fossil.
Type material—ANSP 86720a, holotype; ANSP 86720 (1), 86731 (2), 86732 (2), 86733 (2), 86735 (2), 86736 (2), 86737 (2), paratypes.
Remarks—Synonym of *Xerarionta intercisa* (W. G. Binney, 1857). Pilsbry credited this form to Hemphill, but Pilsbry alone was responsible for its publication.
- rugosa*, *Patula strigosa* var.—HEMPHILL, 1890d:16–17. “New” [Near] Brigham City, Box Elder Co., Utah [Near Boxelder Canyon; limestone ledges; 5000 ft. (PILSBRY, 1939)].
Type material—CAS 052765 (4), 052766 (5), 053050 (7), syntypes; USNM 31173, probable syntypes (2); AMNH 52772 (2), 53979 (2), 61687 (4 in 2 lots), syntypes; SBMNH 33919, syntypes (6).
Remarks—*Oreohelix subrudis rugosa* (Hemphill, 1890), according to PILSBRY (1939:493–494; figs. 313j, k, n).
- salmonacea*, *Helicodiscus fimbriatus* var.—HEMPHILL, in W. G. BINNEY, 1890:189, 220 [spelled *salmonensis* on p. 220; first reviser: PILSBRY (1948:634)]. Banks of the Salmon River and Old Mission, Kootenai Co., Idaho; Oakland, Alameda Co., Calif.
Type material—CAS 058865, syntypes (9), from Salmon River; CAS 058868, ex SUPTC 6197, syntypes (27), from Salmon River; USNM 58551, possible syntypes (3); MCZ 12752, syntypes.
Remarks—*Helicodiscus salmonaceus* Hemphill, 1890, according to PILSBRY (1948:632–635; fig. 344). Hemphill’s Oakland record was probably based on specimens of *Speleodiscoides spirellum* A. G. Smith, 1957.
- salmonensis*, *Helicodiscus fimbriatus* var.—see under *salmonacea*, *H. fimbriatus* var.
- saucius*, *Epiphragmophora traskii*—BARTSCH, 1916:612–613, 619; pl. 114, figs. 10–12, ex Hemphill MS [in synonymy of *E. traskii traskii* (Newcomb, 1861)]. Los Angeles Co., Calif.
Remarks—Material formerly in type collections has no type status because the name was never made available.
- shepardi*, *Zonites*—HEMPHILL, in W. G. BINNEY, 1892:167. Santa Catalina Id., Los Angeles Co., Calif.
Type material—CAS 058843, syntypes (3); CAS 058844, ex SUPTC 5845, syntypes (24), both lots labeled “types” by Hemphill; ANSP 86664, syntype (1); UCM 21434, syntypes (8); SBMNH 33928, syntype (1).
Remarks—*Pristiloma (Priscovitroops?) shepardae* (Hemphill, 1892), according to PILSBRY (1946:409; fig. 220). Following the examples given in the 1985 edition of the *ICZN Code* (Art. 32c[ii]), Hemphill’s incorrect

masculine ending on the name, which was dedicated to Ida Shepard [Oldroyd], is to be replaced with the correct termination.

sodalis, *Helix* var.—HEMPHILL, 1901b:122-123, 124; pl. 1, fig. 3 [as *H. ruficincta sodalis* on pp. 123, 124].

San Nicolas Id., Ventura Co., Calif.; subfossil.

Type material—CAS 039383, syntypes (9), labeled "types" by Hemphill; CAS 038315 (3), 038316 (13), 038357 (1), 038359 (7), 039383 (9), 039386 (8), 058818 (12), 061429 (10), syntypes; ANSP 79750, syntypes (6); USNM 107898 (4), 107900 (8), 174151-174156 (14), 332190 (4), syntypes.

Remarks—*Micrarionta sodalis* (Hemphill, 1901).

sonomaensis, *Helix* var. [also as *H. (Triodopsis) loricata* var.]—HEMPHILL, 1911:101. Near Healdsburg, Sonoma Co., Calif.

Type material—CAS 058855, syntypes (5), labeled "types" by Hemphill; ANSP 11144, syntypes (4).

Remarks—*Trilobopsis loricata sonomaensis* (Hemphill, 1911), according to PILSBRY (1940:783; fig. 467c).

stearnsi, *Ocenebra* [*sic*]—HEMPHILL, 1911:100-101. Monterey, Monterey Co., Calif.

Type material—CAS 058824, syntypes (2), labeled "types" by Hemphill; CAS 058825, *ex* SUPTC 6242, syntypes (2).

Remarks—Synonym of *Ocenebra gracillima* Stearns, 1871, according to SMITH & GORDON (1948:188).

straminea, *Ariolimary* [*sic* for *Ariolimax*] *columbianus* var.—HEMPHILL, 1891b:120 [HEMPHILL, 1890f:13, *nomen nudum*, as *Ariolimax*]. Santa Cruz Id., Santa Barbara Co., Calif.

Type material—CAS 021161, syntypes (4), labeled "types" by Hemphill.

Remarks—*Ariolimax (A.) columbianus stramineus* Hemphill, 1891, according to PILSBRY (1948:709, 720-721; fig. 385f).

subangulata, *Helix (Mesodon) fidelis* var.—HEMPHILL, 1890f:16 [*nomen nudum*] [*non H. subangulata* PFEIFFER, 1855:53]. No locality given.

subcarinata, *Aglaja fidelis* var.—Hemphill, in W. G. BINNEY, 1892:185-186 [HEMPHILL, 1892a:314, *nomen nudum*]. Humboldt Co., Calif. [near Eureka (label)].

Type material—CAS 058845, syntypes (3), labeled "types" by Hemphill.

Remarks—*Monadenia (M.) fidelis subcarinata* (Hemphill, 1892).

subcarinata, *Helix tryonii* var.—HEMPHILL, 1891a:332 [*non H. subcarinata* MONTAGU, 1803:438-439; pl. 7, fig. 9]. Santa Barbara Id., Los Angeles Co., Calif.; subfossil.

Type material—CAS 058812, syntypes (5), labeled "types" by Hemphill; CAS 037717, syntypes (4);

USNM 174320-174324, syntypes (10); SBMNH 33924, syntypes (33).

Remarks—Synonym of *Plesarionta tryoni hemphilli* (Edson & Hannibal, 1911), a new name for Hemphill's preoccupied name. PILSBRY (1939) introduced a new taxon because of this homonymy (see under *carinata*), missing Edson & Hannibal's earlier (1911) replacement.

subcarinata, *Patula strigosa* var.—HEMPHILL, 1890a:133.

Rathdrum, Kootenai Co., Idaho.

Type material—CAS 058858, lectotype (PILSBRY, 1939:424); CAS 050483 (4), 050487 (5), 050488 (4), 050489 (5), 050490 (3), 050493 (9), paralectotypes; ANSP 62284 (2), 62321a (1), 62321 (4), paralectotypes; AMNH 53971, paralectotypes (2). PILSBRY's (1893:118) citation of Binney's illustration as "type" does not constitute a lectotype designation.

Remarks—Synonym ("form") of *Oreohelix strigosa strigosa* (Gould, 1846), according to PILSBRY (1939:419-421, 423-424). See also HANNA & SMITH (1939:384, 385, 391; pl. 34, figs. 4-6). ANSP 62284 was also cited as "type" of *Patula strigosa picta* Hemphill, 1890, by PILSBRY (1939:420, fig. 279-28) (*q.v.*).

subdolos, *Helix tudiculata* var.—HEMPHILL, 1890g:41-42 [HEMPHILL, 1890f:16, *nomen nudum*]. San Jacinto [*sic* for Jacinto], San Diego Co. [*sic* for Riverside Co.], Calif.

Type material—CAS 058829 (2), 058830 (2), 058831 (2), syntypes, labeled "types" by Hemphill; SBMNH 33918, syntypes (6).

Remarks—*Helminthoglypta (H.) tudiculata subdola* (Hemphill, 1890), according to PILSBRY (1939:73-74; figs. 34a-d).

subquadrata, *Amphysphyra*—HEMPHILL, 1881c:9, *ex* Carpenter MS [*nomen nudum*].

Remarks—Later made available by KEEP (1887) (COAN, 1985:213).

tenuis, *Selenites vancoverensis* var. [also as *S. concavus* var.]—Hemphill, in W. G. BINNEY, 1892:166 [HEMPHILL, 1890f:13, *nomen nudum*, as *S. concava* var.]. Napa Co., Calif. [Aetna Springs (label)].

Type material—CAS 050632, lectotype (PILSBRY, 1946:221; fig. 109); CAS 058878, paralectotype (1).

Remarks—Synonym ("form") of *Haplotrema (Ancomena) minimum* (Ancey, 1888), according to PILSBRY (1946:218, 221; fig. 109).

tincta, *Tegula gallina*—KEEP, 1887:84, *ex* Hemphill MS. Type locality not given, but presumably southern Calif.

Type material—Not located.

Remarks—Synonym of *Tegula gallina* (Forbes, 1852). This varietal name has sometimes been dated from PILSBRY, 1889:169-170, *ex* Hemphill MS, and several institutions have supposed types of this taxon credited

to Hemphill or to Pilsbry, including ASNP 37967, 40788, 40791, 40793 (see COAN, 1985:213).

transfuga, *Selenites vancouverensis* var.—Hemphill, in W. G. BINNEY, 1892:165 [HEMPHILL, 1890f:13, *nomen nudum*, as *S. concava* var.]. San Diego, San Diego Co., Calif., to Bahía Todos Santos, Baja Calif.

Type material—CAS 051479 (4), 051483 (4), syntypes from near San Diego; AMNH 60676, syntype (1), from near San Diego; UCM 21131, “paratypes or topotypes” (13); SBMNH 33941, syntypes (2), from near San Diego.

Remarks—*Haplotrema* (*Greggiella*) *transfuga* (Hemphill, 1892), according to PILSBRY (1946:214–215; figs. 103-5, 105).

tremperi, *Murex carpenteri*—DALL, 1910:96, ex Hemphill MS. Santa Barbara [San Pedro] Channel off Newport, Orange Co., Calif. [64 m (label, as 35 fm)].

Type material—USNM 219904, holotype.

Remarks—Synonym of *Pteropurpura macroptera* (Deshayes, 1839), according to McLEAN (1978:42). HEMPHILL (1911:99–100; pl. 1) later proposed this name himself. Material formerly in some type collections, such as CAS 058879, was probably not studied by Dall.

tricolor, *Helix kelleetti* var.—HEMPHILL, 1891a:334 [non *Helix tricolor* PFEIFFER, 1850:129] [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Catalina Id., Los Angeles Co., Calif.

Type material—CAS 037190 (6), 037203 (6), 037580 (6), 037663 (6), syntypes; USNM 174426–174429, syntypes (8); AMNH 51949, syntypes (2); UCM 20676, “paratypes” (15).

Remarks—Synonym of *Xerarionta kelleetti* (Forbes, 1850).

tularensis, *Arionta tudiculata* var.—Hemphill, in W. G. BINNEY, 1892:187 [HEMPHILL, 1890f:16, *nomen nudum*, as *Helix* (*Mesodon*) *tudiculata* var.]. Tulare Co., Calif. [Fraser’s Mill, Mountain Home, Tulare Co., Calif.; 6280 ft. (labels)].

Type material—CAS 058813 (3), 058814 (4), 058815 (1), syntypes, labeled “types” by Hemphill; CAS 058943 (4), 058944 (4), syntypes; AMNH 51904, syntypes (2).

Remarks—*Helminthoglypta* (*H.*) *tularensis tularensis* (Hemphill, 1892).

tularensis, *Epiphragmophora traskii*—PILSBRY, 1895:199; 1897:59, ex Hemphill MS [*nomen nudum*] [not to be confused with *Arionta tudiculata* var. *tularensis* Hemphill, in W. G. Binney, 1892, *q.v.*].

Remarks—A name for this supposed Californian species, *E. traskii tularica*, was first made available by BARTSCH (1916:615, 619; pl. 116, figs. 1–3), in which it was not credited to Hemphill. ROTH (1982) has shown that it was based on material actually from Baja California and is a synonym of *Plesarionta orcutti* (Dall, 1900).

utahensis, *Patula strigosa* var.—Hemphill, in W. G. BINNEY, 1886:27, 30, 33 [locality only on this page (PILSBRY, 1939)] [HEMPHILL, 1878:2, *nomen nudum*, as *P. hemphilli* var.]. Oquirrh Mts., near Salt Lake City, Salt Lake Co., Utah [4300 ft., among limestone rocks (labels)].

Type material—CAS 054343 (5), 054539 (5), 054541 (7), 054542 (6), 054543 (7), 054544 (5), syntypes; ANSP 23051a, “holotype”; ANSP 23051, “paratypes” (2); ANSP 23049 (2), 23050 (3), syntypes; USNM 363232 (4), 31184 (2), 58404 (2), 58441 (2), syntypes; USNM 31179 (2), 31182 (2), 58405 (2), possible syntypes; AMNH 56605 (3), 61702 (4 in 2 lots), syntypes; SBMNH 33932, syntypes (6).

Remarks—Synonym (“form”) of *Oreohelix haydeni oquirrhensis* (Hemphill, 1886), according to PILSBRY (1939:469–471; fig. 304-1), who said that the description on p. 33 is really in part of *O. yavapai magnicornu* Pilsbry, 1916.

varius, *Helix tryonii* var.—HEMPHILL, 1891a:331 [HEMPHILL, 1890f:17, *nomen nudum*]. Santa Barbara Id., Los Angeles Co., Calif.

Type material—CAS 037694, syntypes (6); USNM 174360–174365, syntypes (12); AMNH 51802 (2), 52041 (2), syntypes; UCM 20686, “paratypes” (12).

Remarks—Synonym of *Plesarionta tryoni* (Newcomb, 1864).

verna, *Epiphragmophora traskii*—BARTSCH, 1916:612–613, 619; pl. 114, figs. 13–15, ex Hemphill MS [in synonymy of *E. traskii traskii* (Newcomb, 1861)]. Los Angeles Co., Calif.

Remarks—Material formerly in some type collections, such as CASGTC 2753–2758, has no type status because the name was never made available.

walkeriana, *Helix*—HEMPHILL, 1911:102–103; pl. 2. San Luis Obispo [Co.], Calif. [near Morro Bay (ROTH, 1973)].

Type material—CAS 058838, syntypes (6 + 2 epiphragms), labeled “types” by Hemphill; USNM 174679–174682 (8), syntypes; ANSP 112424, syntypes (4); UCM 20178, “paratypes” (4); SBMNH 33958, syntypes (22). ROTH (1973:148–154; fig. 3), illustrates a CAS syntype.

Remarks—*Helminthoglypta* (*H.*) *walkeriana walkeriana* (Hemphill, 1911). There are additional Hemphill lots in the CAS and SBMNH general collections that may also be part of the original material.

wasatchensis, *Lymnaea stagnalis*—F. C. BAKER, 1911:152, 153, 518; pl. 20, figs. 10–12; text fig. 11, ex Hemphill MS. Near Salt Lake, Utah.

Type material—CAS 058832, syntypes (2); CAS 058833, ex SUPTC 5818 (26), syntypes.

Remarks—*Lymnaea stagnalis wasatchensis* F. C. Baker, according to McDONALD (1969:13; pl. 1, fig. d),

who credited the species to Hemphill as did Baker, but Baker alone was responsible for its publication.

wasatchensis, *Patula strigosa* var.—HEMPHILL, in W. G. BINNEY, 1886:27, 29, 34, 47; pl. 2, fig. 7 [HEMPHILL, 1878:2, as *P. idahoensis* var. "*wassatchensis*," *nomen nudum*]. Wasatch Mts., near Ogden, Weber Co., Utah; among quartzite boulders [4500 ft.; 1877 (labels)].

Type material—USNM 102170, "orig. type figd." (1); CAS 050290 (5), 050291 (4), 050292 (8), 050293 (5), 050295 (5), 050297 (6), 050298 (5), 050299 (5), 050300 (5), 050301 (5), 050302 (5), syntypes; AMNH 35163 (9), 53980 (2), 56610 (1), 56611 (2), 61685 (4 in 2 lots), syntypes; UCM 20656, "paratypes" (24); SBMNH 33950, syntypes (14).

Remarks—*Oreohelix peripherica wasatchensis* (Hemphill, 1886), according to PILSBRY (1939:456–457; figs. 300b–e).

wascoensis, *Tonites* [*sic* for *Zonites*] (*Conulus*?)—HEMPHILL, 1911:102. Wasco Co. and near Salem, Marion Co., Oregon.

Type material—CAS 058828 (2), syntypes from Wasco Co., Oregon, labeled "types" by Hemphill.

Remarks—*Pristiloma (Priscovitrea) wascoense* (Hemphill, 1911), according to PILSBRY (1946:414–415; fig. 224).

Class Polyplacophora

decoratus, *Callistochiton*—HEMPHILL, 1875:6 [*nomen nudum*].

Remarks—Later made available by KEEP (1887) (COAN, 1985:213).

fimbriatus, *Callistochiton*—HEMPHILL, 1875:6, *ex* Carpenter MS [*nomen nudum*].

Remarks—Later made available by KEEP (1887) (COAN, 1985:213).

Class Cephalopoda

stearnsii, *Loligo*—HEMPHILL, 1892d:51. Fish markets in San Francisco and Oakland, Calif.

Type material—CAS 021005, syntypes (2) in alcohol; CAS 021006, syntypes (4), dried pens, both lots from a fish market in Oakland, Alameda Co., Calif.

Remarks—Suppressed by the International Commission on Zoological Nomenclature when synonymized with *Loligo opalescens* Berry, 1911 (ICZN Opinion 1122, 1979), and the two are now regarded as synonyms (VOSS, 1974).

LITERATURE CITED AND BIBLIOGRAPHY

All works cited in the text, including the sources of senior homonyms but not junior or senior synonyms, are listed here. Volume, bulletin, monograph, memoir, and professional paper num-

bers are listed in bold face; series numbers, in parentheses, precede volume numbers; issue numbers, in parentheses, follow volume numbers; supplementary information, such as second methods of listing volumes, part numbers, and parenthetical statements, are given in brackets. Plates and portraits are listed, but not text figures, maps, charts, or tables. Exact dates of publication are given when possible.

ADAMS, CHARLES BAKER. 1851. Descriptions of new species and varieties of the land shells of Jamaica, with notes on some previously described species. *Lyc. Natur. Hist. New York, Ann.* **5**(3):77–98 (May 1851) [reprinted: *Contrib. to Conch.* **9**:153–174].

ADAMS, JOHN. 1800. Descriptions of some minute British shells. *Linn. Soc. London, Trans.* **5**:1–6; pl. 1.

ANCEY, CESAR-MARIE FELIX. 1882. Coquilles nouvelles ou peu connues. *Le Naturaliste* **4**(4):29 (15 Feb. 1882).

ANONYMOUS. 1914a. In memorium—Henry Hemphill. *San Diego Soc. Natur. Hist., Trans.* **2**(1):58–60; 1 portrait (Nov. 1914).

———. 1914b. [. . . note on the disposition of the Hemphill collection]. *Nautilus* **28**(7):83 (20 Nov. 1914) [reprinted from the *Los Angeles Tribune*, 30 Sept. 1914].

———. 1915. [Note on the Hemphill collection being acquired by the California Academy of Sciences]. *Science* (n.s.) **41**(1050):242 (12 Feb. 1915).

ANTHONY, JOHN GOULD. 1865. Descriptions of new species of North American Unionidae. *Amer. J. Conch.* **1**(2):155–164; pls. 12–16 (15 April 1865).

ANTON, HERMANN EDUARD. 1839. Verzeichniss der Conchylien welche sich in der Sammlung von H. E. Anton befinden. *Anton: Halle.* xvi + 110 pp.

BAILY, JOSHUA LOGAN. 1962. [Letter to "Dear Friends"]. *Western Assoc. Shell Clubs, News* **3**(1):14–17 (1 July 1962).

BAKER, FRANK COLLINS. 1911. The Lymnaeidae of North and Middle America. *Chicago Acad. Sci., Spec. Publ.* **3**:xvi + 539 pp.; 58 pls.; 51 text figs. (15 Feb. 1911).

———. 1945. The molluscan family Planorbidae. *Univ. Illinois: Urbana, Illinois.* xxxvi + 530 pp.; 141 pls.; frontis. [collation, revision, and additions by Harley Jones van Cleave] [indexed in H. B. BAKER (1946)].

BAKER, HORACE BURRINGTON. 1946. Index to F. C. Baker's "The Molluscan family Planorbidae." *Nautilus* **59**(4):127–141 (27 June 1946).

———. 1962. Type land snails in the Academy of Natural Sciences of Philadelphia I. North America, north of Mexico. *Acad. Natur. Sci. Philadelphia, Proc.* **114**(1):1–21 (15 May 1962).

———. 1964. Type land snails in the Academy of Natural Sciences of Philadelphia III. Limnophile and thalassophile Pulmonata. IV. Land and fresh-water Prosobranchia. *Acad. Natur. Sci. Philadelphia, Proc.* **116**(4):149–193 (20 Oct. 1964).

BARTSCH, PAUL. 1916. The Californian land shells of the *Epi-phragmophora traskii* group. *U.S. Natl. Mus., Proc.* **51**(2170): 609–619; pls. 114–117 (21 Dec. 1916).

BERRY, SAMUEL STILLMAN. 1932. Three new mountain snails from Idaho and Nevada. *Pomona College, J. Entomol. Zool.* **24**(4):57–63; 10 figs. (Dec. 1932).

———. 1938. New helicoid snails from the southern Sierras. *Pomona College, J. Entomol. Zool.* **30**(2):41–51; 18 figs. (June 1938).

BINNEY, AMOS. 1837. A monograph of the helices of the United States. *Boston J. Natur. Hist.* **1**(4):466–495; pls. 12–21 [repr.: 32 pp.; 10 pls.].

- BINNEY, WILLIAM GREENE. 1886. A second supplement to the fifth volume of the terrestrial air-breathing mollusks of the United States and adjacent territories. Harvard Univ., Mus. Comp. Zool., Bull. 13(2):23-48; 3 pls. (Dec. 1886).
- . 1890. A third supplement to the fifth volume of the terrestrial air-breathing mollusks of the United States and adjacent territories. Harvard Univ., Mus. Comp. Zool., Bull. 19(4):183-226; 11 pls.; 25 unnum. figs. (May 1890).
- . 1892. A fourth supplement to the fifth volume of the terrestrial air-breathing mollusks of the United States and adjacent territories. Harvard Univ., Mus. Comp. Zool., Bull. 22(4):163-204; 4 pls.; 9 unnum. figs. (Jan. 1892).
- BOSS, KENNETH JAY, JOSEPH ROSEWATER & FLORENCE RUHOFF. 1968. The zoological taxa of William Healey Dall. U.S. Natl. Mus., Bull. 287:427 pp.
- BROOKS, S. T. & B. W. BROOKS. 1931. List of types of Amphineura and Gastropoda catalogued in the collection of the Carnegie Museum on January 1, 1931. Carnegie Mus., Ann. 20:179-253.
- BURCH, JOHN BAYARD. 1975. Freshwater unionacean clams (Mollusca: Pelecypoda) of North America. [U.S. Environmental Protection Agency, Identif. Manual 11—Biota of Freshwater Ecosystems]. Malacological Publications: Hamburg, Mich. xviii + 204 pp.; 252 figs. (June 1975).
- . 1982. Freshwater snails (Mollusca: Gastropoda) of North America. U.S. Environmental Protection Agency, Office of Research & Development, Environmental Monitoring & Support Lab., EPA-600/3-82-026. vi + 294 pp. (April 1982).
- CALL, R. ELLSWORTH. 1884. On the Quaternary and Recent Mollusca of the Great Basin with descriptions of new forms. U.S. Geol. Surv., Bull. 11:56 pp.; 6 pls.; 3 figs. (post-30 Aug. 1884).
- CLENCH, WILLIAM JAMES. 1944. Hemphill's catalogue of the land and freshwater shells of Utah. Nautilus 57(3):108 (9 Feb. 1944) [see also PILSBRY (1944)].
- CLENCH, WILLIAM JAMES & RUTH DIXON TURNER. 1962. New names introduced by H. A. Pilsbry in the Mollusca and Crustacea. Acad. Natur. Sci. Philadelphia, Spec. Publ. 4: 218 pp.; portrait on cover.
- COAN, EUGENE VICTOR. 1972. What's the difference? Authorship of a taxon. Veliger 15(1):64-65 (1 July 1972).
- . 1985. A bibliography and list of molluscan names of Josiah Keep. Veliger 28(2):211-215 (1 Oct. 1985).
- COSTA, ORONZIO GABRIELE [& A. COSTA]. 1839 [1829-1870]. Fauna del regno di Napoli ossia enumerazione di tutti gli animali . . . contenente la descrizione de' noui o poco esattamente conosciuti . . . di O. G. Costa (continuata da A. Costa). 19 sect. in 11 vols.
- DA COSTA, EMANUEL MENDES. 1778. Historia naturalis testaceorum Britanniae, or the British conchology; . . . The author: London. xii + 254 + [x] pp.; 17 pls.
- DALL, WILLIAM HEALEY. 1883. Variations of *Pompholyx*. Science 1(7):203 (23 March 1883).
- . 1909. Contributions to the Tertiary paleontology of the Pacific Coast I. The Miocene of Astoria and Coos Bay, Oregon. U.S. Geol. Surv., Prof. Paper 59:279 pp.; 23 pls. (2 April 1909).
- . 1910. Notes on California shells. Nautilus 24(8):95-96 (12 Dec. 1910).
- . 1914. Henry Hemphill. Nautilus 28(5):58-59 (22 Sept. 1914).
- . 1918. Changes in and additions to molluscan nomenclature. Biol. Soc. Washington, Proc. 31:137-138 (29 Nov. 1918).
- FÉRUSSAC, ANDRÉ ETIENNE JUST PASCAL JOSEPH FRANÇOIS D'AUDEBARD. [1821] 1821-1822. Tableaux systematiques des animaux mollusques classés en familles naturelles, . . . ; suivis d'un prodrome général pour tous les mollusques terrestres ou fluviatiles, vivants ou fossiles; . . . Bertrand: Paris and Sowerby: London. xlviii (1822) + 27 (1821) + 111 (1821) pp.
- FÉRUSSAC, JEAN BAPTISTE LOUIS D'AUDEBARD DE, ANDRÉ ETIENNE JUST PASCAL FRANÇOIS D'AUDEBARD DE FÉRUSSAC [& GERARD PAUL DESHAYES]. [1821] 1819-1851. Histoire naturelle generale et particuliere des mollusques terrestres et fluviatiles. Oeuvre posthume de Mr. le Baron J. B. L. D'Audebard de Férussac . . . continué par M. le Baron d'Audebard de Férussac et G. P. Deshayes. 2 vols. + atlas [livr. 1-28, 1819-1832, by Férussac & Férussac; livr. 29-42, 1838-1851, by Deshayes].
- GMLIN, JOHANN FREDERICH. 1791. Caroli a Linne . . . Systema naturae per regna tria naturae . . . edition decima tertia, acuta, reformata 1(6). Beer: Leipzig. pp. 3021-3910 (pre-14 May 1791).
- HANNA, G DALLAS & ALLYN GOODWIN SMITH. 1939. Notes on some forms of *Oreohelix strigosa* (Gould). Calif. Acad. Sci., Proc. (4)23(25):381-392; pls. 33-36 (29 Dec. 1939).
- HEMPHILL, HENRY. 187[?]. Catalogue. Land, fresh-water, and marine shells of California and adjacent states. For sale by Henry Hemphill. Hemphill: San Diego. 2 pp. [not seen; cited by DALL (1909:204), but not in Dall Library at the NMNH].
- . 1873. [. . . the fossils presented by Mr. Hemphill, . . .]. Calif. Acad. Sci., Proc. (1)5(10):154 (Oct. 1873).
- . 1875. New catalogue of the shells of California and adjacent states. Hemphill: San Diego. 8 pp.
- . 1876. Note on *Helix pulchella*, Müller. Quart. J. Conch. 1(8):128-129 (Feb. 1876).
- . 1877. Description of a new California mollusk. Calif. Acad. Sci., Proc. (1)7(1):49 (exact date unknown).
- . 1878. Hemphill's catalogue of the land & freshwater shells of Utah. Hemphill: Oakland, Calif. 4 pp. [concerning this publication see CLENCH (1944) and PILSBRY (1944)].
- . 1881a. Liste des mollusques terrestres recueillis dans la partie septentrionale de la Basse Californie (Mexique). J. Conchyl. 29[(3)21](1):35-38 (1 Jan. 1881).
- . 1881b. On the variations of *Acmaea pelta*, Escholtz [sic]. Acad. Natur. Sci. Philadelphia, Proc. 33:87-88 (14 June 1881).
- . 1881c. New catalogue of the shells of California and adjacent states. Hemphill: San Diego, Calif. 12 pp.
- . 1881d. A list of fossil mollusks from the Tertiary beds of California. Hemphill: San Diego, Calif. 2 pp.
- . 1882. On the habits and distribution of the geoduck, a clam of the Pacific (*Glycymeris generosa*, Gld.), with suggestions as to its introduction into the Atlantic coast of the U.S. U.S. Fish Comm., Bull. 1:200-201.
- . 1886. [see W. G. BINNEY, 1886] (Dec. 1886).
- . 1890a. Descriptions of new varieties of North American land shells. Nautilus 3(12):133-135 (7 May 1890).
- . 1890b. [see W. G. BINNEY, 1890] (May 1890).
- . 1890c. An American *Anadenus*. Nautilus 4(1):2-3 (9 June 1890).
- . 1890d. New varieties of *Patula strigosa*. Nautilus 4(2): 15-18 (27 June 1890).
- . 1890e. New forms of western limniades. Nautilus 4(3):25-27 (6 July 1890).
- . 1890f. Catalogue of North American shells collected and for sale by Henry Hemphill. Hemphill: San Diego. 21

- pp., with a pasted-in list of corrections (pre-21 July 1890; date of receipt at USNM) [concerning this publication see OFFICERS . . . (1890) and SIMPSON (1891)].
- . 1890g. New varieties of western land shells. *Nautilus* 4(4):41–43 (5 Aug. 1890).
- . 1890h. *Haliotis rufescens*, Swains. *Nautilus* 4(5):59 (1? Oct. 1890).
- . 1891a. A collector's notes on variation in shells, with some new varieties. *Zoe* 1(11):321–337; pl. 10 (Jan. 1891).
- . 1891b. *Ariolimary* [sic] *columbianus* var. *straminea*. *Nautilus* 4(10):120 (1 Feb. 1891).
- . 1891c. Edible mollusks of western North America. *Zoe* 2(2):134–139 (July 1891).
- . 1892a. Studies among mollusks—instinct and genera. *Zoe* 2(4):312–318 (Jan. 1892).
- . 1892b. [See W. G. BINNEY (1892)] (Jan. 1892).
- . 1892c. Note on *Helix yatesii* Cooper. *Zoe* 3(1):45–47 (April 1892).
- . 1892d. Note on a Californian *Loligo*. *Zoe* 3(1):51–52 (April 1892).
- . 1893. Notes on the animals of some West Coast shells. *Zoe* 3(4):350–352 (Jan. 1893).
- . 1894. A new species of *Bulimulus*. *Zoe* 4(4):395–396 (12? March 1894).
- . 1897. Description of a new variety of land snail from Idaho. *Nautilus* 11(7):74–75 (1 Nov. 1897).
- . 1901a–c. A contribution to West Coast conchology. *Nautilus* 14(10):109–113 (1 Feb. 1901); (11):121–125; pl. 1 (1 March 1901); (12):136–140 (6 April 1901).
- . 1902. Notes on *Haliotis rufescens* Sw. *Nautilus* 16(7):84 (3 Nov. 1902).
- . 1905a. A second contribution to West Coast conchology—I. *Nautilus* 19(1):5–8; 1 map (9 May 1905).
- . 1905b. [See PILSBRY (1905)] (19 May 1905).
- . 1905c. A second contribution to West Coast conchology—II. *Nautilus* 19(2):19–24 (5 June 1905) [“to be continued,” but never completed].
- . 1907. Note on the genus *Haliotis*, with a description of a new variety. *San Diego Soc. Natur. Hist., Trans.* 1(2):56–60 (exact date unknown).
- . 1911. Description of some varieties of shells, with short notes on the geographical range and means of distribution of land shells. *San Diego Soc. Natur. Hist., Trans.* 1(3):99–108; 4 pls. (exact date unknown).
- . 19[?]. Check list of West Coast shells. 4 pp.
- HENDERSON, JUNIUS. 1929a. Some new forms of non-marine Mollusca from Oregon and Washington. *Nautilus* 42(3):80–82 (15 Jan. 1929).
- . 1929b. Some notes on *Oreohelix*. *Calif. Acad. Sci., Proc.* (4)18(8):221–227; pl. 24 [part] (5 April 1929).
- HENDERSON, JUNIUS & LORENZO E. DANIELS. 1917. Hunting Mollusca in Utah and Idaho in 1916. *Acad. Natur. Sci. Philadelphia, Proc.* 69:48–80 (6 April 1916), 81 (24 April 1916).
- HOWARD, FAYE BALLOU. 1972. Henry Hemphill. *Tabulata* 5(1):3–4; portrait on issue cover (1 Jan. 1972).
- JOHNSON, RICHARD IRWIN & HORACE BURRINGTON BAKER. 1973. The types of Unionacea (Mollusca: Bivalvia) in the Academy of Natural Sciences of Philadelphia. *Acad. Natur. Sci. Philadelphia, Proc.* 125(9):145–186; 10 pls. (27 Dec. 1973).
- KANAKOFF, GEORGE PAUL. 1950. Some observations on the land snails of San Clemente Island. *So. Calif. Acad. Sci., Bull.* 49(3):79–89; pls. 26–31 (8 Dec. 1950).
- KEEP, JOSIAH. 1887. West coast shells. A familiar description of the marine, fresh water, and land mollusks of the United States, found west of the Rocky Mountains. Bancroft Bros.: San Francisco, Calif. 230 pp.; 182 figs.; frontis. (July 1887).
- LEA, ISAAC. 1838. Descriptions of new freshwater and land shells. *Amer. Philos. Soc., Trans. (n.s.)* 6(1):1–153; 24 pls. (15 June 1838).
- LINNAEUS, CAROLUS. 1758. *Systema naturae per regna tria naturae . . . editio decima, reformata 1 [regnum animale]*. Salvii: Stockholm. 824 + iii pp. (1 Jan. 1758).
- MCDONALD, SHARON LEE CHALFANT. 1969. The biology of *Lymnaea stagnalis* L. (Gastropoda: Pulmonata). *Sterkiana* 36:1–17; 1 pl. (Dec. 1969).
- MCLEAN, JAMES HAMILTON. 1978. Marine shells of southern California. Revised ed. Los Angeles Co. Mus. Natur. Hist., Sci. Ser. 24:104 pp.; 54 pls. (20 March 1978).
- MILLER, WALTER BERNARD. 1985. A new subgenus of *Helminthoglypta* (Gastropoda: Pulmonata: Helminthoglyptidae). *Veliger* 28(1):94–98(1 July 1985).
- MILLER, WALTER BERNARD, RICHARD L. REEDER, NOORULLAH BABRAKZAI & H. LEE FAIRBANKS. 1984. List of new and revised Recent taxa in the North American terrestrial Mollusca (north of Mexico) published since 19 March 1948. Part 1. *Tryonia* 11:i + 14 pp. (30 July 1984).
- MONTAGU, GEORGE. 1803. *Testacea Britannica, or natural history of British shells, marine, land, and fresh-water, including the most minute: systematically arranged and embellished with figures*. J. S. Hollis: Romsey. xxxvii + 606 pp.; 16 pls.
- MÜLLER, OTTO FREDERICK. 1773–1774. *Vermium terrestrium et fluviatilium, seu animalium infusoriorum, helminthicorum et testaceorum, non marinorum, succincta historia, . . . Heineck & Faber: Havniae & Lipsiae* [1:[xxx] + 135 pp. (1773); 72 + [viii] pp. (1774); 2:xxxvi + 214 + [x] pp. (1774)].
- OFFICERS OF THE AMERICAN ASSOCIATION OF CONCHOLOGISTS. 1890. [concerning Mr. Henry Hemphill's recent catalogue of North American shells]. *Nautilus* 4(6):69–70 (14 Oct. 1890) [see also SIMPSON, 1891, esp. footnote].
- PFEIFFER, LOUIS. 1845. Descriptions of twenty-two new species of *Helix*, from the collections of Miss Saul, ——— Walton, Esq., and H. Cuming, Esq. *Zool. Soc. London, Proc.* 13[for 1845](148):71–75 (Oct. 1845).
- . 1850. Descriptions of twenty-four new species of heli- cea, from the collection of H. Cuming, Esq. *Zool. Soc. London, Proc.* 17 [for 1849](198):126–131 (pre-July 1850).
- . 1855. Descriptions of forty-two new species of *Helix*, from the collection of Hugh Cuming, Esq. *Zool. Soc. London, Proc.* 22 [for 1854](262):49–57 (10 Jan. 1855).
- PILSBRY, HENRY AUGUSTUS. [1889] 1888–1890. *Trochidae. Manual of conchology* (1)10(39):161–208; pls. 40–45 (1 Oct. 1888); (40):209–323; pls. 39a, 46–69 (3 Jan. 1889); 11(41):1–64; pls. 1–14 (17 April); (42):65–128; pls. 15–32 (5 July); (43):129–208; pls. 33–50 (30 Sept.); (44, 44a):209–519; pls. 51–67 (7 March 1890).
- . [1893] 1892–1893. *Helicidae* 6. *Manual of conchology* (2)8(29):1–48; pls. 1–15 (25 July 1892); (30):49–112; pls. 16–27 (25 Nov. 1892); (31):113–160; pls. 28–41 (25 Feb. 1893); (32):161–314; pls. 42–58 (1 July 1893).
- . [1895] 1893–1895. *Helicidae* 7. *Manual of conchology* (2)9(33):1–48; pls. 1–14 (16 Nov. 1893); (34):49–112; pls. 15–28 (19 March 1894); (35):113–160; pls. 29–40 (27 July 1894); (33a, 36):161–336; i–xlvi; frontis.; pls. 41–71 (2 Feb. 1895); (33, Appendix):1–126 (Index to Helicidae) (April 1895).
- . [1897] 1897–1898. A classified catalogue of American

- land shells, with localities. *Nautilus* **11**(4):45-48 (5 Aug. 1897); (5):59-60 (1 Sept.); (6):71-72 (4 Oct.); (7):83-84 (1 Nov.); (8):93-96 (6 Dec.); (9):105-108 (3 Jan. 1898); (10):117-120 (1 Feb.); (11):127-132 (4 March); (12):138-144 (3 April) [reprinted, 1898, 35 pp.].
- . 1899. Catalogue of the Amnicolidae of the western United States. *Nautilus* **12**(11):121-127 (5 March 1899).
- . 1905. Mollusca of the southwestern states, I: Urocopidae; Helicidae of Arizona and New Mexico. *Acad. Natur. Sci. Philadelphia, Proc.* **57**:211-290; pls. 11-27 (19 May 1905).
- . 1913. Note on a new variety of *Epiphagmophora* [sic] *tudiculata*. *Nautilus* **27**(5):49-50 (9 Sept. 1913).
- . 1924. Californian helices. *Nautilus* **38**(2):54-55 (22 Oct. 1924).
- . 1934. Notes on the anatomy of *Oreohelix*,—III, with descriptions of new species and subspecies. *Acad. Natur. Sci. Philadelphia, Proc.* **85**:383-410; pls. 14, 15; 19 figs. (3 March 1934).
- . 1939-1948. Land Mollusca of North America (north of Mexico). *Acad. Natur. Sci. Philadelphia, Monogr.* **3**. Vol. 1(1):xvii + 573 + ix pp.; figs. A + 1-377 (9 Dec. 1939); (2):viii + 575-994 + ix pp.; figs. 378-580 (1 Aug. 1940). Vol. 2(1):viii + 520 pp.; frontis.; figs. 1-281 (9 Dec. 1946); (2):xlvii + 521-1113 pp.; figs. 1 + 282-585 (19 March 1948).
- . 1944. [On "Hemphill's catalogue of the land and freshwater shells of Utah"]. *Nautilus* **57**(4):144 (15 May 1944) [see also CLENCH (1944)].
- POIRET, JEAN LOUIS MARIE. 1801. Coquilles fluviatiles et terrestres observées dans le département de l'Aisne et aux environs de Paris. *Prodrome*. Barrois: Paris and the author: Soissons. xi + 119 pp.
- RÖDING, PETER FREDERICH. 1798. *Museum Boltenianum . . . : pars secunda contiens conchyliia sive testacea univalvia, bivalvia & multivalvia*. Trappii: Hamburg. vii + 109 pp. (Nov. or Dec. 1798).
- ROSSMÄSSLER, EMIL ADOLF. 1837. *Iconographie der Land- und Susswasser-Mollusken mit vorzüglicher Berücksichtigung der europäischen noch nicht abgebildeten Arten; . . .* 1(5/6):ii + 70 pp.; pls. 21-30. Arnold: Dresden & Leipzig. (post-July 1837).
- ROTH, BARRY. 1973. *Helminthoglypta traskii fieldi* Pilsbry, 1930 (Gastropoda: Stylomatophora). *So. Calif. Acad. Sci., Bull.* **72**(3):148-155 (Nov. 1973).
- . 1982. The identity of "*Helminthoglypta*" *tularica* (Bartsch) (Gastropoda: Pulmonata). *So. Calif. Acad. Sci., Bull.* **81**(3):101-105; 6 figs. (Dec. 1982).
- SAY, THOMAS. 1821. Descriptions of univalve shells of the United States. *Acad. Natur. Sci. Philadelphia, J.* **2**(1):149-179 [pp. 149-160 (Nov. 1821); pp. 161-179 (Dec. 1821)].
- SIMPSON, CHARLES TORREY. 1891. Notes on Mr. Hemphill's catalogue. *Nautilus* **4**(10):110-112 (1 Feb. 1891) [see also OFFICERS . . . (1890)].
- SMITH, ALLYN GOODWIN. 1943. Mollusks of the Clearwater Mountains, Idaho. *Calif. Acad. Sci., Proc.* (4)**23**(36):537-554; pl. 48 (18 Aug. 1943).
- SMITH, ALLYN GOODWIN & MACKENZIE GORDON, JR. 1948. The marine mollusks and brachiopods of Monterey Bay, California, and vicinity. *Calif. Acad. Sci., Proc.* (4)**26**(8):147-245; pls. 3-4 (15 Dec. 1948).
- SMITH, JUDITH TERRY. 1978. Primary types in the Stanford Paleontological Type Collection. *Bull. Amer. Paleo.* **72**(300):313-552 (14 March 1978).
- SOLEM, ALAN. 1975. Notes on Salmon River Valley oreoheleid land snails, with description of *Oreohelix waltoni*. *Ve-liger* **18**(1):16-30; 5 pls.; 7 figs. (1 July 1975).
- STEARNS, ROBERT EDWARDS CARTER. 1901. The fossil freshwater shells of the Colorado Desert, their distribution, environment, and variation. *U.S. Natl. Mus., Proc.* **24**(1256):271-299; pls. 19-24 (28 Dec. 1901).
- TAYLOR, DWIGHT WILLARD, H. J. WALTER & JOHN BAYARD BURCH. 1963. Freshwater snails of the subgenus *Hinkleyia* (Lymnaeidae: *Stagnicola*) from the western United States. *Malacologia* **1**(2):237-281; 4 pls.; 8 figs. (July 1963).
- TRYON, GEORGE WASHINGTON. 1867. Monograph of the terrestrial Mollusca of the United States [part]. *Amer. J. Conch.* **3**(1):34-80; pls. 7-10 (4 April 1867).
- VAGVOLGYI, JOSEPH. 1968. Systematics and evolution of the genus *Triodopsis* (Mollusca: Pulmonata: Polygyridae). *Harvard Univ., Mus. Comp. Zool., Bull.* **136**(7):145-254; 7 pls. (12 Feb. 1968).
- VOSS, GILBERT L. 1974. *Loligo stearnsii* Hemphill, 1892 (Mollusca, Cephalopoda): request for suppression under the Plenary Powers. *Z.N.(S.)* 2041. *Bull. Zool. Nomencl.* **31**(1):51-53 (31 July 1974).
- WEBB, GLENN R. 1970. Fragmentary observations on the sexuality of *Cryptomastix hendersoni* Pilsbry and *C. magnidentata* Pilsbry and a new subgenus (Pulmonata, Polygyridae, Ashmunellinae). *Gastropodia* **1**(8):77-78; pl. 35 [part] (26 Dec. 1970).
- WILSON, EDWARD C. & GEORGE L. KENNEDY. 1967. Type specimens of recent invertebrates (except Arachnida and Insecta) in the San Diego Natural History Museum. *San Diego Soc. Natur. Hist., Trans.* **14**(19):237-280 (17 Nov. 1967).
- WU, SHI-KUEI & NANCY E. BRANDAUER. 1982. Type specimens of Recent Mollusca in the University of Colorado Museum. *Univ. Colorado Mus., Natur. Hist. Inventory of Colorado*, no. 7:47 pp. (Oct. 1982).